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ABSTRACT

This manual provides directions for administering, scoring, and interpreting the 44-item Change Facilitator Stages of Concern Questionnaire (CFSoCQ), which measures types of concerns that persons have in relation to their change facilitator role. Section 1 provides background information about earlier research (describing concerns, initial research on teachers' concerns, initial verification of the Stages of Concern about the innovation, development and initial testing of the CFSoCQ, and dynamics of Stages of Concern), and presents a general overview of concerns theory. Section 2 describes the CFSoCQ (definitions of change facilitator stages of concern; means, standard deviations, and alpha coefficients for the CFSoCQ based on 589 and 750 respondents; and intercorrelations of the scale scores on the CFSoCQ based on 589 respondents). Sections 3 and 4 present CFSoCQ administration and interpretation procedures. Section 5 summarizes cautions and limitations of the questionnaire. Six appendixes include a sample cover letter, the CFSoCQ, computer and pencil-and-paper scoring procedures, and a list of references. The CFSoCQ and this manual contribute to the understanding of the educational innovation process and increase the repertoire of methods to make the change process more humane and change facilitators more responsive. (RLC)

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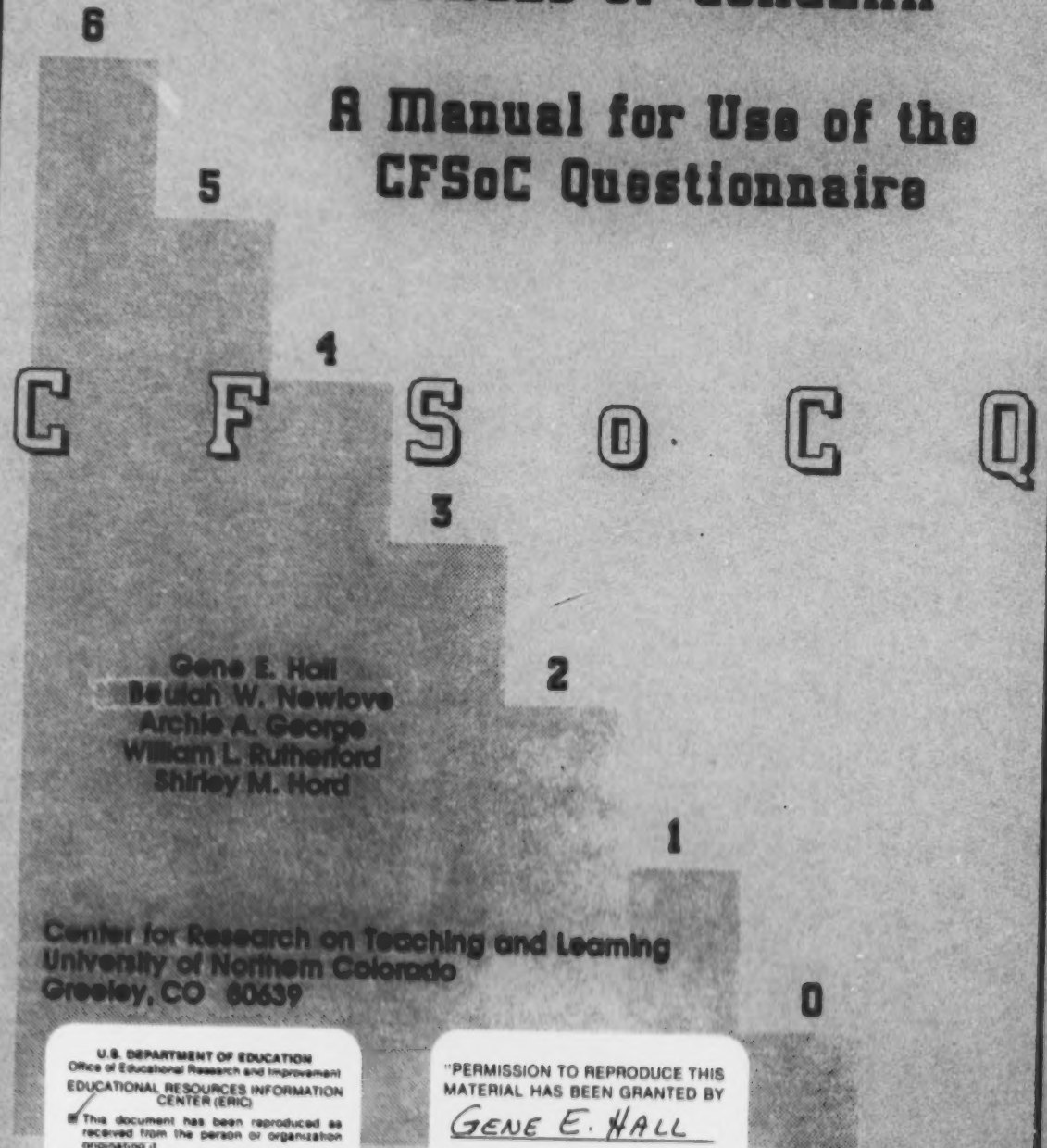
MEASURING CHANGE FACILITATOR STAGES OF CONCERN

A Manual for Use of the CFSoC Questionnaire



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PREFACE

The need to develop the Change Facilitator Stages of Concern Questionnaire (CFSoCQ) emerged out of the widely expanding use of the Stages of Concern Questionnaire (SoCQ). The SoCQ was designed in the early 1970s to assess the concerns of teachers and college faculty in relation to use of educational innovations. The SoCQ consists of 35 items to which individuals respond on a 7-point Likert-type scale. The items were selected to represent the different types of concerns that teachers and other educators have as they are first introduced to an educational innovation, begin to use it, then move on to more experienced and mature perspectives and increased confidence in use of an innovation.

As the SoC Questionnaire was used in more and more diverse settings, it was only natural that it would begin to be applied to school principals, department heads and others who were more "removed" from front-line use of the innovation. Since most educational innovations target teachers' use in classrooms, the SoCQ items were written for that context. Because of the important role played by principals and other facilitators who work with educational innovation users, it was often deemed important to have these persons also complete the SoCQ. However, as the concerns questionnaire was completed by principals, and others who were removed from the classroom, there were indications that the questionnaire was perceived as less relevant by them. There were frequent comments from principals and others that many of the items did not directly fit their situations; because they were not teaching students on a regular basis. Other aspects of the classroom environment, which were incorporated in the SoCQ items, made it difficult for non-teachers to respond. In addition to questions of relevance, with widening applications, questions about the extent of generalizability of the SoCQ to non-teaching personnel, and questions of reliability and validity emerged.

By the late 1970s, the research agenda on change had expanded to the point that we and our colleagues were systematically examining the role of school principals and other "change facilitators." Our earlier research had focused on assessing aspects of the change process as it was experienced by individual teachers and college faculty--the users of educational innovations. The research agenda, by the late 1970s, shifted to examining how individuals external to front-line use of the innovation were affecting classroom practice. The generic role of "change facilitator" was defined to represent the diverse set of persons, within and outside of organizations, who have the formal or informal role to aid those involved in learning to use innovations.

The earlier Stages of Concern work with teachers, as well as the ongoing observations of principals and other change facilitators, documented that change facilitators have

"concerns" about their roles that in many ways have the same dynamics as the concerns of teachers about their use of an innovation. It became important to better understand facilitators' concerns in order to determine how these concerns influence the actions of facilitators and ultimately the implementation of educational innovations. If an effective means for identifying facilitator concerns could be developed, then this information could be used to help facilitators become more effective in their role. Thus, in early 1979, we and our colleagues in the Concerns-Based Adoption Model (CBAM) Project began to develop a specialized questionnaire, the Change Facilitator Stages of Concern Questionnaire (CFSoCQ), which is presented in this manual. For 3 years a number of our colleagues within the Research and Development Center for Teacher Education, as well as many of the CBAM cadre and others, assisted in the development and refinement of this questionnaire. By 1981, a reasonably sound form of the CFSoCQ had been developed and piloted in a number of settings. With the refinement work that has been done since, the CFSoCQ is an even stronger measure than the earlier SoCQ.

We encourage future users to pay particular attention to Section 5 of this manual where limitations and restrictions are outlined. As with the SoCQ, it is important to recognize that as the CFSoCQ is used in more widely disparate contexts, its reliability and validity may diminish. Importantly, as is emphasized at a number of points in this manual, the items in the CFSoCQ should not be changed. Making changes in the items without a full understanding of concerns theory is sure to destroy reliability and validity of the measure. The CFSoCQ is generic in terms of its frame of reference and descriptors, and as a consequence, changing the items should not be necessary for most applications. If changes in the items need to be considered, the authors should be contacted.

For more information about the CFSoCQ, the SoCQ or other aspects of our research with various elements of the Concerns-Based Adoption Model, please feel free to contact us. We will attempt to be as collegial as possible and are most interested in learning about the work of others, especially as it relates to the use of one or more of the concepts of the Concern-Based Adoption Model.

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TABLE OF CONTENTS

Page

Preface iv

Introduction 1

Section I. Background: Concerns Theory and Research 4

- Defining Concerns 4
- Teachers' Concerns About Teaching 5
- Stages of Concern About the Innovation 8
- Change Facilitator Stages of Concern 12
- The Dynamics of Stages of Concern 13

Section II. The Change Facilitator Stages of Concern About the Innovation Questionnaire 15

- Previous Research in Measuring Teachers' Concerns About an Innovation 15
- Change Facilitator Stages of Concern 15
- Development of the CFSoCQ 18
- Reliability and Validity of the CFSoCQ 19

Section III. Using and Scoring the CFSoC Questionnaire 21

- Components of the CFSoC Questionnaire 21
- Administering the CFSoCQ 23
- Scoring the CFSoCQ 25
- Displaying the CFSoCQ Data 26

Section IV. Interpretation of CFSoC Questionnaire Data 29

- Peak Stage Score Interpretation 30
- Group Data 31
- Double Peak Score Interpretation 33
- Profile Interpretations 33
- Typical CFSoCQ Profiles 34
- Typical Experienced Change Facilitator's Profile 38

Section V. Limitations and Restrictions 43

References 45

Appendices

- A. Sample CFSoC Questionnaire 48
- B. CFSoCQ Raw Score Percentile Conversion 49
- C. Computer Scoring the CFSoCQ 50
- D. Grid for Plotting CFSoCQ Profile Scores 51
- E. CFSoCQ Quick Scoring Device 52
- F. CBAM International 53

TABLE OF FIGURES

Page

Section I

1 Overview of Concerns Code 6
2 Stages of Concern About the Innovation 10
3 Coefficients of Internal Reliability for Different Stages of Concern Questionnaires 11
4 Hypothesized Development of Stages of Concern 14

Section II

1 Definitions: Change Facilitator Stages of Concern 17
2 Means, Standard Deviations and Alpha Coefficients for the CFSoCQ Based on 589 Respondents 19
3 Means, Standard Deviations and Alpha Coefficients for the CFSoCQ Based on an Additional 750 Respondents 19
4 Intercorrelations of the Scale Scores on the CFSoCQ Based on 589 Respondents 20

Section III

1 Introductory Page to the CFSoCQ 22
2 Item Numbers and Associated Stages of Concern About Facilitating the Use of the Innovation 25
3 CFSoCQ -- Items for Each Stage of Concern 27
4 Raw Score-Percentile Conversion Chart for the Change Facilitator Stages of Concern Questionnaire 28

Section IV

1 Example of Identifying High Stage Scores 30
2 Frequency of Highest Concerns Stage for the Individuals Displayed in Figure IV.1 31
3 Group Profile of Change Facilitators' Stages of Concern 32
4 Concerns About Other Things and Wanting to Know More About This Innovation 35
5 Profile Focused on Informational Concerns 36
6 Profile: High Personal Concerns 38
7 Profile: Primary Management Concerns 39
8 Profile: One's Impact as a Facilitator 40
9 Profile: High Concerns About Collaboration 41
10 Profile: High Refocusing Concerns, Impact Concerns 42

INTRODUCTION

The idea of teachers having concerns and that these concerns would change with increasing experience and maturity was originally proposed by Frances Fuller in the late 1960s (Fuller, 1969). She and her colleagues at the Research and Development Center for Teacher Education systematically documented the kinds of concerns that preservice teachers experienced as they progressed through their teacher education programs. Out of this work, the idea that teachers' concerns tended to move through a pattern from initial unrelated concerns, to self, task, and ultimately impact concerns was a useful schema for understanding and making sense of the comments regularly heard of student teachers and others as they experienced teacher education.

Concerns are not unique to the preservice and inservice experiences of teachers. In 1973, Hall, Wallace, and Dossett prepared a paper hypothesizing that there were a set of "stages of concern about an innovation" that educators experienced whenever they were introduced to a new or different educational product or process (i.e., innovation). Research and development activities to verify this hypothesis with school teachers and college faculty were pursued during the 1970s. The earlier work of Fuller provided a useful foundation for developing more refined measurement procedures, and conducting studies that would advance the theory about the dynamics of concerns. This work led to explorations of the interrelationships between arousal and resolution of concerns, and identification of concerns-based interventions (Hall, 1979).

Three different measurement procedures were developed to assess Stages of Concern. One of these, the open-ended format, was a direct application of the measurement procedure that Fuller had used in most of her studies (Fuller & Case, 1972). A specialized manual (Newlove & Hall, 1976) was developed for interpretation of the open-ended data that were provided by teachers and college faculty as they described their innovation-related concerns in a narrative fashion. A brief interview procedure was developed for use in more clinical applications. With this technique (the "one-legged conference") change facilitators such as principals and others hold brief, informal interviews with teachers and others. The interviewer is trained to probe and listen for the kinds of expressions that are indicative of particular Stages of Concern.

For research purposes, the Stages of Concern Questionnaire (Hall, George, & Rutherford, 1979) was developed. The questionnaire format provides a more

psychometrically rigorous way of assessing Stages of Concern. Further, the resultant "profiles" provided additional clinical insight, which has been useful in practice as well as in research applications.

As research on the change process continued, it became clear that facilitators also have concerns, that these concerns influence how they fulfill their role, and that it would be useful to learn more about facilitator concerns. For example, diagnosing the concerns of principals and others in middle management roles could help upper level administrators provide appropriate types of assistance. Hopefully, understanding one's own concerns could help facilitators to become more effective in their role. Also, providing facilitators with more insight and understanding of their own concerns could help them experience the change process in a more positive way. Finally, on a broader scale, learning more about the influence of facilitators' concerns on the change process might lead to the formulation of better policies, practices, and procedures related to school improvement.

The Stages of Concern Questionnaire format was used as the starting point in developing the Change Facilitator Stages of Concern Questionnaire (CFSoCQ). The CFSoCQ was designed to reflect all that had been learned from the earlier work of Fuller, Borich, George (1974, 1978) and others in assessing teachers' concerns and the later work done to develop the SoC Questionnaire. As a consequence, it was possible to develop the Change Facilitator Stages of Concern Questionnaire with a clearer articulation of the difference between scales (i.e., stages) and to create a quality product with less development costs. We already had a successful model in the SoCQ, especially for item format, stage definition, scoring, and interpretation procedures. Further, the increasing need for a means to assess the concerns of change facilitators led to a number of opportunities to pilot test and refine the CFSoCQ.

The results of this work are recorded in this manual. The Change Facilitator Stages of Concern Questionnaire is a proven and useful way of measuring the types of concerns that persons have in relation to their change facilitator role. Although it uses a particular innovation as a frame of reference, the CFSoCQ has been designed to be generic. The only "customizing" that needs to be done for each application is to insert the name of the innovation on the front page. The questionnaire items are written to be usable with most, if not all, educational innovations and for persons in most, if not all, formal and informal change facilitator roles. The CFSoCQ can be used with persons in line and staff positions and it can be completed by teachers and others who may have less formal roles (than the formally identified facilitator) in facilitating implementation of educational innovations.

In this manual the measure is presented with directions for administration, scoring, and interpretation. In the first section, background information is provided about earlier research and a general overview of concerns theory is presented. In Section 2, the questionnaire is described. In Sections 3 and 4 administration and interpretation procedures are presented. Section 5 is a summary of cautions and limitations. The appendices include a sample cover letter, the questionnaire, computer and paper/pencil scoring procedures, and a list of references. We believe that the CFSoCQ itself, and the information provided in the manual, can make a constructive contribution to the understanding of the change process. It can also increase our repertoire of methods to make the change process more humane and change facilitators more responsive. Both are underlying goals of the concerns-based approach.

SECTION I

BACKGROUND: CONCERNS THEORY AND RESEARCH

In addition to proposing the concept of teacher concerns, Frances Fuller, along with a series of colleagues, launched a set of exploratory and descriptive studies to further elaborate the concept of concerns and to develop procedures for assessing concerns. In this section the work of Fuller, the related studies of others, subsequent work by our project at R&DCTE, and the related studies of our colleagues are summarized. Citations of selected literature are provided, as well as brief excerpts from related documents that contribute to the background steps, procedures, and outcomes that led to development of the Change Facilitator Stages of Concern Questionnaire (CFSoCQ). This background is organized into five parts: (1) defining concerns, (2) the initial research on teachers' concerns, (3) initial verification of the Stages of Concern about the innovation, (4) development and initial testing of the Change Facilitator Stages of Concern Questionnaire, and (5) the dynamics of Stages of Concern.

Defining Concerns

The world around us is complex. It is not possible to focus at any one time on all of the different stimuli and conditions surrounding us, and there is much that we do not perceive at all. Of all that we do perceive, we are not equally attentive to each part. Each component and each element individually and in various combinations are of different interest and priority, with many being of little or no interest at any given time.

However, certain aspects of our world are of higher priority. Some appear to leap out demanding our attention. The way we perceive our environment and think about it is dependent upon the unique and multifaceted person that each of us is, as well as on the characteristics of the issue, idea or thing that is of attention. Our past history, personality factors, motivations, needs, feelings, education, roles, status, our entire psycho-social being in relation to our experiences and knowledge shape how we perceive and, in our minds, contend with the issues, objects, and problems at hand. The reason for attention to be focused on a particular issue may be external, influenced by others, by a thing or an idea; or the demands may be internal, coming from within ourselves; or there may be a combination of internal and external stimuli at work.

The composite representation of these feelings, preoccupations, thoughts, and considerations about a particular issue or task is called concern. Depending on our personal make-up, knowledge, and experiences, each person perceives and mentally contends with a given issue differently; thus, there are different kinds of concerns. The issue may be interpreted as an outside threat to one's well-being, or it may be seen as rewarding. There may be an overwhelming feeling of confusion and lack of information about what "it" is. There may be ruminations about effects of being involved with it. The demand to consider the issue may be self-imposed in the form of a goal or objective that one wishes to reach; or the pressure that results in increased attention to the issue may come from the prior work, expectations of a leader or some other source. In response, our minds explore ways, means, potential barriers, possible actions, risks, and rewards. The mental activity composed of questioning, analyzing and re-analyzing, considering alternative actions and reactions, and anticipating consequences is concern. An aroused state of personal feelings and thought about an issue, phenomenon, or condition as it is perceived is concern.

To be concerned means to be in a mentally aroused state about something. The intensity of the arousal will depend on the person's past experiences and associations with the subject of the arousal, as well as how close to the person and how immediate the stimulus is perceived to be. Close personal involvement is likely to mean more intense (i.e., more highly aroused) concern, which will be reflected in greatly increased mental activity, focus of thought, worry, analysis, and anticipation. Through all of this, it is the person's perceptions that stimulate concerns, not necessarily the reality of the situation. It is this gestalt of psychological activity that is being tapped in the CFSoCQ.

Teachers' Concerns About Teaching

The concept of concerns as a way to represent different affective, motivational or personal stages emerged out of the research that Frances Fuller and her colleagues began in the 1960s. In her studies, Fuller examined the concerns of pre-service teachers during the time that they were involved in the professional components of their teacher education programs. In her initial conception (1969), Fuller proposed that concerns could be organized along a time or maturity dimension that ranged from "early" concerns to "late" concerns. This conception emerged from clinical impressions and interviews of student teachers. With further analyses, Fuller began to discern some sub-clusters of concerns. These concerns are summarized in Figure I.1. This set of codes preserved the experiential dimension that Fuller had observed as well as the more macro scales of unrelated, self, task, and impact concerns that had been posited earlier.

In Fuller's studies, concerns were assessed through the use of the open-ended concerns statements (Fuller & Case, 1972). In this format, teachers were asked to express their concerns as a written response to the stimulus: "When you think about your teaching,

Figure I.1 Overview of Concerns Code

I. Concerns About Self

Code 0. Non-Teaching Concerns
Statement contains information or concerns which are unrelated to teaching. Codes 1 through 6 are always concerns with teaching. All other statements are Coded 0.

II. Concerns About Self as Teacher

Code 1. Where Do I Stand?
Concerns with orienting oneself to a teaching situation, i.e., psychological, social, and physical environment of the classroom, school and/or community. Concerns about supervisors, cooperating teachers, principal, and parents. Concerns about evaluation, rules, or administrative policy, i.e., concern about authority figures and/or acceptance by them.

Code 2 How Adequate Am I?
Concern about one's adequacy as a person and as a teacher. Concern about discipline and subject matter adequacy.

Code 3. How Do Pupils Feel About Me? What Are Pupils Like?
Concern about personal, social, and emotional relationships with pupils. Concern about one's own feelings toward pupils and about pupils' feelings toward the teacher.

III. Concern About Pupils

Code 4. Are Pupils Learning What I'm Teaching?
Concern about whether pupils are learning material selected by the teacher. Concern about teaching methods which help pupils learn what is planned for them. Concern about evaluating pupil learning.

Code 5. Are Pupils Learning What They Need?
Concern about pupils' learning what they need as persons. Concern about teaching methods (and other factors) which influence that kind of learning.

Code 6. How Can I Improve Myself As A Teacher?
(And Improve All That Influences Pupils?) Concern with anything and everything which can contribute to the development, not only of the pupils in the class, but of children generally. Concern with personal and professional development, ethics, educational issues, resources, community problems, and other events in or outside the classroom which influence pupil gain.

Fuller, F.F. Concerns of teachers: A developmental conceptualization. American Educational Research Journal, 1969, 6(2), 207-226.

what are you concerned about? (Do not say what you think others are concerned about, but only what concerns you now.) Please be frank." The subsequent open-ended statement constructed by each teacher was content analyzed. Basically, the content analysis procedure entailed coding each sentence within the overall statement in terms of the particular concern category that was reflected therein. This procedure was the one used for all of the initial studies by Fuller and others. This approach to assessing concerns has been very useful for practitioners, but for research purposes there are serious limitations.

One problem with the open-ended concerns statement as a research tool is the difficulty of attaining consistently high levels of interpreter reliability and validity. Each rater has to be trained to a sufficient level that they interpret a particular sentence in the same fashion. Further, each sentence has to be placed within the context of the other sentences of the statement and the gestalt of the paragraph has to be taken into account when judging the overall reflection of concerns.

The problems of inter-rater reliability and estimates of validity are further compounded by the extreme variation in the amount of information that respondents provide. Some respondents simply list topics of concern while others provide one or two sentences. Some will write extensive paragraphs of descriptions of their concerns. All too frequently respondents turn in blank pages (which makes interpretation particularly problematic). As a consequence, toward the end of her work Fuller engaged the assistance of Gary Borich and Archie George to develop a Teacher Concerns Questionnaire.

The 51-item Teacher Concerns Checklist (George, Borich, & Fuller, 1974) resulted from that effort. This questionnaire consists of 51 items which are descriptions of different concerns. Teachers respond to these items by indicating their degree of concern about each using a 1 to 5 scale that ranges from "not concerned" to "extremely concerned".

Subsequent work by George (1978) reduced this questionnaire to the 15-item Teacher Concerns Checklist which assessed the three major scales--self, task, and impact. Separate sets of norms were established for use with preservice teachers and inservice teachers.

A number of studies have been done with each of these measurement procedures and with samples of preservice and inservice teachers. The various studies have consistently supported the general pattern of concerns.

The movement of concerns is not lockstep or unidirectional and there are individual differences, yet the overall pattern has been regularly observed. The approach to teacher education that results from designing a program with the typical patterns of concerns in

mind has become known as the "personalized"[1] approach to teacher education (Fuller, 1970). The importance of viewing teacher education from the perspective of the teacher and redefining the role of the faculty, the sequence of courses, and the interactions between these has been summarized in the 1975 NSSE yearbook chapter by Fuller and Bown, "Becoming a Teacher." In combination, all of this work clearly documents the general pattern of progression of concerns and has proposed various hypotheses and prescriptions about the ways that teacher education programs and experiences should be designed and sequenced to best address the concerns of teachers as teachers have the concerns.

It may be useful to the reader to know that some (e.g., Zeichner & Teitlebaum, 1982) reject the personalized approach in favor of other approaches to teacher education. However, it is our contention that concerns theory applies to their approaches as well. We argue they will be more successful in accomplishing their expressed goals if they take concerns theory into account. We suspect that their debate in many ways is a red herring and that their teacher education practices are more in line with concerns theory than they are willing to admit (or understand).

Stages of Concern about the Innovation

While the concerns questionnaire development work was underway by Fuller, Borich and George, Hall and Newlove were engaged in a field experiment of facilitating change in teacher education programs in schools, colleges and departments of education located around North America. In this work, the researach team noticed a regularity to the "concerns" of teacher educators as they were introduced to innovative practices. Because of Hall and Newlove's direct involvement in Fuller's work, the connection was made between the concept of concerns about teaching and the types of concerns that were being expressed by teacher educators.

Since the focus of the work of Hall and Newlove at that time was on facilitating change, it was an easy step to move from Fuller's conceptualization of concerns about teaching to concerns of teacher educators about change. The field notes, experiences and observations of teacher educators involved in change was the data base for moving to the concept of Stages of Concern about an Innovation. This was done in 1970 and 1971 and was the keystone of the initial conceptualization of the Concerns-Based Adoption Model (CBAM) (Hall, Wallace, & Dossett, 1973).

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[1] Frances Fuller was not always comfortable with this label. She suggested that it sounded too much like being "sanforized." Younger readers will not be able to appreciate this analogy, but it does illustrate our concern about offering standardized treatments for what we see as a personalistic phenomena.

Concern about the innovation was proposed in the CBAM as one of the key diagnostic dimensions that change facilitators should consider in designing interventions. As the 1970s unfolded the concept of Stages of Concern about an innovation was refined, and a set of seven stages was defined and initially verified to occur in both teachers and teacher educators as they were experiencing the change process. The paragraph definitions of these stages of concern are summarized in Figure I.2

Three different assessment procedures were developed and utilized in the studies of teachers' and teacher educators' concerns about change. These were: (a) one-legged interviewing, an informal technique that change facilitators can use as they talk with clients; (b) the open-ended concerns statements, which is the same format used by Fuller and her associates in their pioneering work; and (c) development of a specialized stages of concern questionnaire which drew upon the earlier experiences of Borich and George, and the extensive field notes that Hall and Newlove compiled.

The SoCQ consists of 35 items, or concerns statements, which individuals rate using a seven-point Likert scale. The response options range from "irrelevant" to "very true of me now." The SoCQ was developed through a number of systematic steps to identify and select items and to test rigorously reliability and validity (for description of the SoCQ, and its development and use see Hall, George, & Rutherford, 1979, Measuring Stages of Concern About the Innovation: A Manual for the Use of the SoC Questionnaire.

The resultant 35-item Stages of Concern Questionnaire (SoCQ) was proven reliable and valid for use with individual as well as group data. In a 1-week test/retest study, stage correlations ranged from .65 to .86, with four of the seven correlations being above .90. Estimates of internal consistency (alpha-coefficients) ranged from .64 to .83 with six of the seven coefficients being above .70. A series of validity studies were conducted, all of which provided increased confidence that the SoCQ measures the hypothesized Stages of Concern.

Since that time, the SoCQ has been used in an extensive array of studies by the CBAM staff (e.g., Hall & Rutherford, 1976; James & Hall, 1981). The SoCQ has been used in other English-speaking countries including Australia and Canada. In addition, the SoCQ has been translated into Flemish and applied to studies in Belgium and The Netherlands (van den Berg & Vandenberghe, 1981). Similar psychometric qualities were observed in this translation. The SoCQ has been applied also on a pilot basis in several other countries including Indonesia, Venezuela, Thailand, and with less rigor adapted for use in other settings.

During the 1980's, four major adaptations and development studies of the SoCQ in English have been done as well. In each case, the researchers replicated the measurement development and validation steps established when developing the SoCQ. Kolb (1983)

Figure I.2 Stages of Concern About the Innovation

0 AWARENESS:
Little concern about or involvement with the innovation is indicated.

1 INFORMATIONAL:
A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unconcerned about herself/himself in relation to the innovation. She/he is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects, and requirements for use.

2 PERSONAL:
The person is uncertain about the demands of the innovation, her/his inadequacy to meet those demands, and her/his role with the innovation. This includes analysis of her/his role in relation to the reward structure of the organization, decision making, and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may be reflected also.

3 MANAGEMENT:
Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are utmost.

4 CONSEQUENCE:
Attention focuses on impact of the innovation on students in her/his immediate sphere of influence. The focus is on relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.

5 COLLABORATION:
The focus is on coordination and cooperation with others regarding use of the innovation.

6 REFOCUSING:
The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. The person has definite ideas about alternatives to the proposed or existing form of the innovation.

Original concept from Hall, G.E., Wallace, R.C., Jr., & Dossett, W.A. A developmental conceptualization of the adoption process within educational institutions. Austin: Research and Development Center for Teacher Education, The University of Texas, 1973.

developed an SoCQ for assessing concerns of nurses about the career of nursing; Barucky (1984) developed an SoCQ for assessing concerns about leadership development in officers in the United States Air Force; and Jordan-Marsh (1985) developed an SoCQ for concerns about exercise. More recently Martin (1989) has developed a concerns questionnaire for users of computing. A summary of reliability estimates and alpha-coefficients for each of these studies is presented in Figure 1.3.

Figure I.3

Coefficients of Internal Reliability
for Different Stages of Concern Questionnaires

		Stage Scales						
Authors	N	0	1	2	3	4	5	6
Hall, George & Rutherford 1979	830	.64	.78	.83	.75	.76	.82	.71
van den Berg & Vandenberghe 1981	1585	.77	.89	.86	.80	.84	.80	.76/.73*
Kolb, 1983	718	.75	.87	.72	.84	.79	.81	.82
Barucky, 1984	614	.60	.74	.81	.79	.81	.79	.72
Jordan-Marsh 1985	214	.50	.78	.77	.82	.77	.81	.65
Martin, 1989	388	.78	.78	.73	.65	.71/.78*	.83	.76
Hall, Newlove, George, Rutherford & Hord 1989	750	.63	.86	.65	.73	.74	.79	.81

* In two studies, authors have proposed two subscales in place of the original SoC scale.

As can be seen in the data sets, the different stages of concern have been verified in a number of different settings and contexts and with different versions of questionnaire items. At the time of initial development of the CFSoCQ, a pattern and precedent had been established with regard to the accepted steps and procedures for developing a stages of concern questionnaire and there had been a number of widespread applications in North America and a number of cross-national verifications as well. All of this work made the development of the CFSoCQ much less problematic and more expedient. The result is a new form of the concerns questionnaire with strong psychometric qualities and ease of use for the generic, yet special, role of change facilitators.

Change Facilitator Stages of Concern

As was mentioned earlier in this section, we hypothesized that change facilitators would have stages of concern that were similar in dynamics to those of teachers. One key set of studies that supported this hypothesis was the secondary analysis of the longitudinal study of teachers' use of a revised science curriculum. Additional confirmation was found in the field work and notes of staff as they were involved in a number of different settings in the late 1970s. These experiences and data tended to support the hypothesis that change facilitators' concerns had similar dynamics to the stages of concerns of front-line users of educational innovations. As a consequence, a measurement development team was established involving senior CBAM project staff who had been involved in the creation of the SoCQ.

Beginning with an extensive array of field notes, as well as the earlier work with the SoCQ, it was possible to formulate working definitions of the different stages that would be applicable to change facilitators. In doing this initial work, in 1979 and early 1980, it was decided that, if at all possible, it would help instrument quality to distinguish between concerns that targeted the innovation specifically and concerns that targeted more directly the role of change facilitator.

The resultant paragraph definitions of the Change Facilitator Stages of Concern are summarized in Figure II.1 located in the next section of this manual. Stages 1 and 6 have by definition been weighted much more strongly towards concerns about the innovation and Stages 0, and 2 through 5 emphasize more heavily the change facilitating role. Clearly all stages are focused on change facilitation of a specific innovation. However, within this stance, the innovation is more strongly targeted in Stages 1 and 6. And concomitantly, the change facilitator role emphasis is heavier in Stages 2 through 5.

Another definitional insight we gained from past experience was to define Stage 0 in such a way that item selection and scale interpretation would avoid the rating of double negative items. Therefore, Stage 0 was defined to indicate increasing amounts of concern about other things in the change facilitators' work life rather than increasing amount of

concern with the innovation. More explanation of this phenomena is provided in Section IV.

More detail about the steps taken in development of the CFSoCQ and its qualities and characteristics are presented in the next section of the manual. The purpose here was to provide general background about where the concept and measurement development procedures came from. The remainder of this section focuses briefly on some aspects of concerns theory that will be important for users of the CFSoCQ to understand as they interpret CFSoCQ data.

The Dynamics of Stages of Concern

The concept of concerns is a useful way to understand the highly complex and dynamic state of emotion and thought that people have in relation to a given change or innovation. For various reasons, the seven stages seem to be the right balance between excessive detail and overly simple generalities. It is possible, with the Stages of Concern as they are defined, to identify more intense concerns and to examine interrelationships between stages. Some additional background on the dynamics of concerns arousal and resolution is explained in this section.

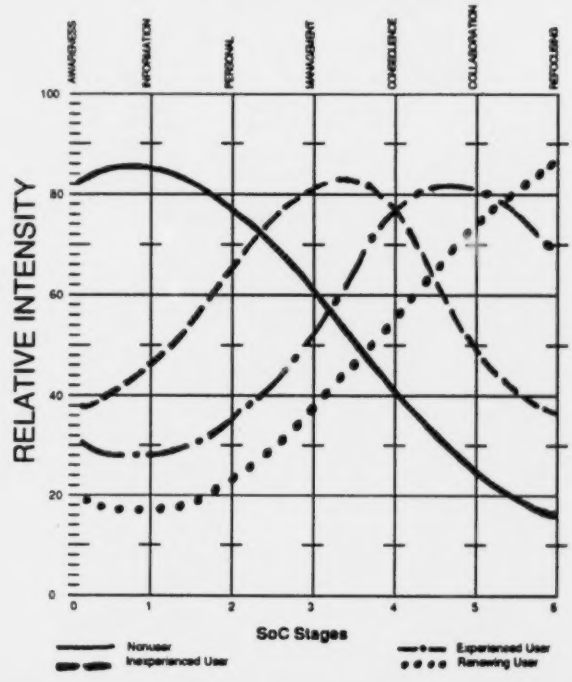
A great deal needs to be understood about the dynamics of Stages of Concern before use can be made of the CFSoCQ and the other procedures for assessing and interpreting concerns. Just as with teachers, change facilitators' stages of concerns move through a process of arousal and resolution. At the simplest level of interpretation, this means that distinctions must be made between those concerns that are relatively more intense, that is, having stronger focus of psychological attention at a particular time, and those that are relatively less intense. It is hypothesized that the stage(s) of concern that is aroused is the one(s) that will be most directly related to action and for which targeted interventions will be perceived as most relevant and helpful. In theory, as the earlier concerns (Stages 0, 1, and 2) are resolved, intermediate and subsequently later concerns will become aroused.

The techniques and steps that can aid in the arousal and resolution of concerns are less understood. Some of the more obvious aspects of concerns-based interventions have been described in relation to the design of staff development for teachers (Hall, 1979; Hall & Loucks, 1978) and for teacher education (Fuller, 1970; Hardy, 1978). The more subtle aspects of creating the arousal of particular concerns and targeting the resolution of concerns is a primitive art. It appears that the arousal of concerns, as Fuller has suggested (1970), is related to more affective oriented experiences, while the resolution of concerns is more related to cognitive types of experiences. The detailed characteristics of interventions for arousal and resolution are speculative at this point since empirical studies have not been done.

What is known, at this time, is that the types of concerns that change facilitators have are quite similar to those of teachers in terms of their expression and dynamics, as long as the shift in frame of reference from innovation user to innovation facilitator is kept in mind. Consequently, the same consideration can be given to "profiles" of facilitator concerns as for teacher "profiles." In theory, there is a general wave motion to the pattern of change in teacher concern profiles as successful change processes unfold. An example of this theoretical flow to concerns is illustrated in Figure I.4. A similar general pattern from self to task to impact concerns can be observed among change facilitators. However, at this time, there is less systematic data and less documentation of the evolution of concerns of change facilitators. There will be more in the future as the number of studies increases.

Until more is known, the basic guideline for persons using the Change Facilitator SoCQ will be to keep in mind the definitions of each stage, the gestalt of the profiles and the general pattern of movement over time. It appears from our work to date that most CFSoCQ profiles will have multiple peaks. The approaches to interpretations of these profiles is presented in Section IV. In the next section, steps in developing the CFSoCQ are described in more detail.

Figure I.4 Hypothesized Development of Stages of Concern



SECTION II

THE CHANGE FACILITATOR STAGES OF CONCERN ABOUT THE INNOVATION QUESTIONNAIRE

When development of the CFSoC measure was started, the format and methodology were based on the extensive previous work described in Section I. This section begins with a brief history of the steps in development of the SoC Questionnaire on which the CFSoC is based. This is followed by a report on the reliability and validity of the scores.

Previous Research in Measuring Teachers' Concerns about an Innovation

In the fall of 1973, the first exploratory attempts were made to assess the concerns of teachers about an innovation. The first pilot instruments consisted of ratings of open-ended concerns statements using a forced ranking procedure. Variations in open-ended formats, the use of Likert scales, adjective checklists, and interviewing procedures were explored initially.

By the early spring of 1974, two successful strategies for measuring Stages of Concern had been identified. The primary strategy was the development of an instrument in the form of a quick-scoring, pencil-and-paper questionnaire. The second strategy entailed the development of a clinical instrument using open-ended questions and an objective scoring procedure for classifying individual responses. The Open-Ended Concerns Statement (Newlove & Hall, 1976) was the result of the second strategy; the SoC Questionnaire (SoCQ) was the product of the first strategy (Hall, George, & Rutherford, 1979).

Change Facilitator Stages of Concern

The SoC Questionnaire (SoCQ) proved to be very satisfactory when used to measure the concerns of teachers, but did not work as well when completed by administrators, staff developers, and others who were responsible for facilitating front-line use of the innovation. Change facilitators who completed the SoCQ indicated that many items were not appropriate because they were phrased for users of the innovation. Also, the norms were problematic. Most change facilitators scored exceptionally high on Stage 5 (Collaboration), which makes sense given the definition of Stage 5.

In early studies of school change, the CBAM project staff had collected anecdotal data about the concerns of principals and staff developers as well as having noted their comments about the SoCQ. These notes and field experiences were used to develop role-specific stage definitions of the concerns of change facilitators.

Defining the Change Facilitator Stages of Concern (CFSoC) meant that there needed to be some combination of innovation-related items and change facilitator role-related items. Extensive descriptive data about the concerns of change facilitators were collected from administrators, staff developers, curriculum coordinators and others. One particularly valuable source of change facilitator concerns descriptions was the CBAM cadre.

The CBAM cadre is an internationally representative group of highly skilled change facilitators who have received extensive training in CBAM concepts, research and applications. CBAM cadre members conduct training sessions on Stages of Concern and other CBAM components, and work with evaluation and research applications of the concerns model. Thus, the CBAM cadre represented skilled impact concern perspectives in relation to the role of change facilitator. In addition, they were a useful source of descriptions of the concerns of other change facilitators who they had as clients.

The outcome of these analyses of descriptive concerns data was initial identification and description of a set of seven Change Facilitator Stages of Concern. The final formal definitions of these Change Facilitator Stages of Concern (CFSoC) are presented in Figure II.1.

The stages represent a balance between innovation-related concerns and change facilitator role concerns. Although all stages include both dimensions, Stages 1 (Informational) and 6 (Refocusing) deal more directly with aspects of the innovation. Stages 2 (Personal), 3 (Management), 4 (Consequence), and 5 (Collaboration) deal more directly with the change facilitator role. Stage 0 (Awareness) addresses the unrelated concerns of change facilitators.

The same stage names were kept for the CFSoC as had been used in the earlier SoC scale definitions. This was done in order to reflect that the concerns dynamic appears to be the same for both change facilitators and innovation user/nonusers. The only differences appear to be role related. Otherwise it appears that there is the same sequence of unrelated, then self, task, and impact concerns that have been observed previously. It is important to point out that this does not mean necessarily that a change facilitator's overall "style" is developed in the same way (Hall, Rutherford, & Griffin, 1982; Hall, Rutherford, Hord & Huling, 1984), just that concerns about facilitating implementation of particular innovations appears to have the same concerns dynamic.

Figure II.1

Definitions: Change Facilitator Stages of Concern

Stage O Awareness:
Change facilitation in relation to the innovation is not an area of intense concern. The person's attention is focused elsewhere.

Stage 1 Informational:
There is interest in learning more about the innovation. The concern is not self-oriented or necessarily change facilitation oriented. The focus is on the need/desire to know more about the innovation, its characteristics, its use and effects.

Self

Stage 2 Personal:
Uncertainty about one's ability and role in facilitating use of the innovation is indicated. Doubts about one's adequacy to be an effective change facilitator and questions about institutional support and rewards for doing the job are included. Lack of confidence in oneself or in the support to be received from superiors, nonusers, and users are a part of this stage.

Task

Stage 3 Management:
The time, logistics, available resources, and energy involved in facilitating others in use of the innovation are the focus. Attention is on the "how to do its" of change facilitation, decreasing the difficulty of managing the change process, and the potential of overloading staff.

Stage 4 Consequence:
Attention is on improving one's own style of change facilitation and increasing positive innovation effects. Increasing the effectiveness of users and analyzing the effects on clients are the focuses. Expanding his/her facility and style for facilitating change is also the focus.

Impact

Stage 5 Collaboration:
Coordinating with other change facilitators and/or administrators to increase one's capacity in facilitating use of the innovation is the focus. Improving coordination and communication for increased effectiveness of the innovation are the focuses. Issues related to involving other leaders in support of and facilitating use of the innovation for increased impact are indicated.

Stage 6 Refocusing:
Ideas about alternatives to the innovation are a focus. Thoughts and opinions oriented towards increasing benefits to clients are based on substantive questions about the maximum effectiveness of the present innovative thrust. Thought is being given to alternative forms or possible replacement of the innovation.

Development of the CFSoCQ

In May 1979, plans were made to build a concerns questionnaire specifically designed to measure the concerns of change facilitators. The questionnaire was to be designed to apply to different innovations and with change facilitators in different organizational roles (e.g., principal, staff developer, and teacher educator). The first draft of this measure was essentially a rewrite of the items on the SoC Questionnaire so that the items were relevant to change facilitators. An open-ended form of the questionnaire was developed, also, which simply asked the respondent to list his or her concerns about facilitating the use of the innovation. In June 1979, a small set of pilot data was collected in each of three sites--Texas (N=18), Florida (N=23), and California (N=10). Each respondent completed both the pilot CFSoCQ and the open-ended questionnaire.

The results of this pilot indicated that a more thorough development effort was needed; the concerns statements of change facilitators were substantially different from the concerns of teachers, so much so that a simple rewording of SoCQ items was not sufficient. A revised set of definitions for the stages that change facilitators experience while working with the innovation was developed, and additional items for the revised instruments were selected from an earlier 195-item pilot SoC Questionnaire. This revised CFSoCQ contained 46 statements of concern for the respondent to evaluate.

In July 1979, a set of 45 open-ended and Likert scale type responses were obtained at a leadership training workshop in Colorado. With the results of this pilot and because of extensive discussions with change facilitators, a third version of the definitions for the stages was developed and the items on the prototype questionnaire further revised. Throughout this process, the focus of the questionnaire items was increasingly placed on the facilitation of other's use of the innovation, rather than upon its use, per se. Also, the stages that measured the change facilitators' concerns about impact were increasingly focused on the impact of the facilitators' efforts and his/her concerns about revising the facilitation process rather than focusing on impact of one's own use of the innovation.

Pilot data were collected at CBAM workshops for change facilitators in August, 1979, in Texas (N=29) and New Mexico (N=23). Item analyses indicated that the internal reliability of the scales were good, (alphas greater than .65 on all scales), but Stages 1 and 2 (Informational and Personal) were too highly intercorrelated. This led to further examination of the CFSoC definitions and a new draft of items for Stages 0, 1, 2, and 3.

In May, 1980, a sample of 219 CFSoC Questionnaires was collected by sending the measure to all change facilitators who had participated in Concerns-Based Consulting Skills Workshops in 1979 and 1980. Analyses of these responses indicated good reliability and

scale intercorrelations for all but Stage 6 (Refocusing). After careful analysis of the Stage 6 concept, several new Stage 6 items were written and incorporated into the CFSoCQ.

During the summer and fall, 1980, an additional set of 288 CFSoC Questionnaires was collected from a variety of workshops and mailings to change facilitators. With these data, factor analyses and other item analyses were used to select the five items for each stage on the final questionnaire.

Reliability and Validity of the CFSoCQ

During 1981, a total of 589 35-item CFSoC Questionnaires were collected. The sample included a range of experience in being a change facilitator, many different educational innovations and variety of job groups (e.g., principal, staff developer, external agents, curriculum developers and university faculty). The means, standard deviations, and alpha coefficients for each of the 5-item scales are shown in Figure II.2.

Figure II.2

Means, Standard Deviations and Alpha Coefficients for the CFSoCQ Based on 589 Respondents

Stage:	0	1	2	3	4	5	6
Means:	11.99	16.91	13.04	17.90	25.88	25.86	9.07
SDs:	5.94	9.49	6.32	7.30	6.34	6.99	6.52
Alphas:	.61	.85	.62	.72	.70	.77	.81

Subsequent analyses of CFSoCQ data have produced essentially identical statistics. For example, a set of 750 CFSoCQ responses, collected after 1981, was analyzed with the resultant statistics shown in Figure II.3.

Figure II.3

Means, Standard Deviations and Alpha Coefficients for the CFSoCQ Based on an Additional 750 Respondents

Stage:	0	1	2	3	4	5	6
Means:	13.20	19.20	11.40	17.66	24.77	24.99	8.40
SDs:	5.93	9.25	6.22	7.18	6.72	7.04	6.18
Alphas:	.63	.86	.65	.73	.74	.79	.81

These statistics indicate that the scales have adequate internal reliability, and the scales are consistent across various innovations. The norms found in the Appendices and in the computer program are based on the sample of 589 respondents. Figure II.4 is a display of the intercorrelations of scale scores.

Figure II.4

Intercorrelations of the Scale Scores on the CFSoCQ
Based on 589 Respondents

Scale:	1	2	3	4	5	6
0	.15	.19	.23	-.15	-.21	.22
1		.24	.09	.23	.18	.05
2			.37	.19	.05	.34
3				.32	.20	.09
4					.67	-.06
5						-.15

Low intercorrelations indicate that scales are measuring different concepts. Only Scales 4 and 5 correlate more than .40. Staff members familiar with the respondent sample indicated that, based on their knowledge, it was likely that many of the respondents had more intense impact concerns. In that case, higher correlations between Stages 4 and 5 would be expected. That is, persons who had one of these Stages of Concern frequently had the other as well.

In summary, the revisions and extensive item reviews resulted in a measure that has independent scales and high internal reliability. In addition, the stage definitions were developed from field realities and are seen as meaningful by practicing change facilitators. The subsequent applications of the CFSoCQ have supported the conclusions of this development work.

SECTION III

USING AND SCORING THE CFSoC QUESTIONNAIRE

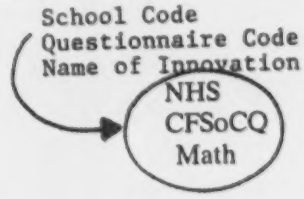
The CFsoC Questionnaire consists of three parts: the introductory page, two pages of items, and a demographic page. The 35 items remain the same for different administrations; the only change is to enter the name of the innovation on the cover page. The CFSoCQ can be administered by mail or in person. A cover letter may be used to introduce the questionnaire and to help focus the respondent on the task. Scoring is based on converting the item raw score totals for each scale into percentile scores, which then become the basis for interpretation.

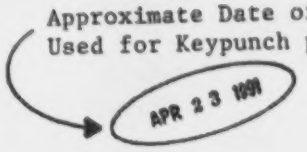
Components of the CFSoC Questionnaire

Examples of the three parts of the CFSoCQ are included in Appendix A. The introductory page presents the purpose of the questionnaire, explains and shows through examples, how to complete the instrument, and indicates which "innovation" the individual is to keep in mind when responding. Space is provided for identification of the respondent, either by name or some type of identification number. Finally, in the upper right-hand corner of the page, a code is normally written to identify the specific institution receiving the questionnaire and the name of the innovation being addressed. This latter information expedites data management when questionnaires are being collected from more than one institution or about more than one innovation. Figure III.1 is a copy of the introductory page with those elements indicated that need to be changed to fit the particular use that is being planned. By simply changing the name of the innovation in the identified space and identifying the institutional setting, the CFSoCQ is ready for use. No changes are necessary in the items or other wording on the introductory page.

The introductory page format is based on extensive feedback from respondents. It clearly conveys the information and directions needed to get accurate responses. For example, in the early pilot studies, some respondents expressed a degree of frustration over the items that seemed irrelevant to them at that moment. Thus, the statement about the applicability of the instrument to a wide range of persons and the underlined statement about relevance of items were added. These steps seemed to alleviate most of the frustration about this point.

Figure III.1 Introductory Page of the CFSoCQ





Concerns Questionnaire

Name _____

or

Last four digits of your Social Security No. _____ _____ _____ _____

The purpose of this questionnaire is to determine what you are thinking about regarding your responsibilities as a change facilitator for an innovation. It is not necessarily assumed that you have change facilitator responsibilities. This questionnaire is designed for persons who do not serve as change facilitators as well as for those who have major responsibility for facilitating change. Because the questionnaire attempts to include statements that are appropriate for widely diverse roles, there will be items that appear to be of little relevance or irrelevant to you at this time. For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For example:

This statement is very true of me at this time.	0 1 2 3 4 5 6 (7)
This statement is somewhat true of me now.	0 1 2 (3) 4 5 6 7
This statement is not at all true of me at this time.	0 (1) 2 3 4 5 6 7
This statement seems irrelevant to me.	(0) 1 2 3 4 5 6 7

Please respond to the items in terms of your present concerns, or how you feel about your involvement with facilitating _____ (please specify the innovation). We do not hold to any one definition of this program, so please think of it in terms of your own perceptions of what it involves. Remember to respond to each item in terms of your present concerns about your involvement or potential involvement as a facilitator of the above-named innovation.

Thank you for taking time to complete this task. Please feel free to write any comments, reactions, or questions you may have about the items on the questionnaire. Also, use the last page to express any additional concerns you have about the innovation or this questionnaire.

Copyright, 1989
Concerns Based Systems International

Initially, some persons tended to respond according to their generalized concerns about their work, rather than to concerns about facilitating a specific innovation or program. Also, there was some tendency to respond on the basis of past concerns, rather than present concerns. The final paragraph was designed to focus the respondents on concerns at the time the CFSoCQ is completed. Because it has been refined so extensively, it is suggested that any changes in the introductory page should be made with great care, for they could dramatically influence the responses given.

The second part of the questionnaire (see Appendix A) consists of the 35 items on two pages. The respondent marks each item on a 0 to 7 Likert scale according to how true it is that the item describes a concern felt by the individual at the present time. The "0" at the end of the scale is recommended for marking items that are completely irrelevant to the respondent at the time of completion. In case there is a question about using 0 as the end point, Barucky (1984) did an extensive analysis of this and concluded that the scaling was working as expected.

Typically, 10 to 15 minutes are required to complete the questionnaire. In all of the uses of the instrument to date, very few respondents have complained about the requirements for completing it. Instead, a number of persons have indicated that the items caused them to think about what they were doing in ways they had previously not considered.

Although the questionnaire is not a test, it is important that respondents complete it without consultation with others. The purpose is to identify the concerns of an individual, not the consensus concerns of several persons.

The third, and optional, part of the CFSoC Questionnaire is the demographic page. This page has been extremely useful in gathering other information about the respondents for both sample description and correlation purposes. Questions on this part of the questionnaire vary according to the information needs of the person or group issuing the instrument. One useful item is to insert an open-ended type of concerns question. The respondents expressing concerns in their own words frequently illustrate the reasons behind the shape of their CFSoCQ profile. The demographic page may be omitted or changed in whatever ways are needed to fit a particular situation. A sample demographic page is found in Appendix A.

Administering the CFSoCQ

There is no one prescribed setting or process for administration of the questionnaire. To date, it has been administered in the following ways:

1. Mailed out with a deadline for completion and picked up personally by the issuing person or group.
2. Handed out personally and returned by mail.
3. Issued and returned via mail.
4. Personally issued and collected on an individual basis.
5. Administered to groups by a project representative.
6. Completed and self scored in a workshop.

The seriousness with which individuals respond to the questionnaire does not seem to vary noticeably in relation to the method of administration. In most situations, a high percentage of subjects have responded to every item with a minimum of confusion and with a response pattern indicating careful and independent consideration of all items.

Several factors that should be considered when administering the questionnaire are:

1. The greater the face-to-face contact in the delivery and collection, the higher the return rate.

2. If the return of the questionnaire is by mail, the percentage of returns is likely to be reduced, especially if it was issued by mail.

3. Respondents should not be asked to return their questionnaire to an immediate superior (e.g., personnel office or superintendent); such a process can be threatening to respondents and create an atmosphere of suspicion within an institution. It is acceptable, however, for a superior to distribute the forms if they can be returned somewhere else. A stamped, addressed envelope attached to the questionnaire has worked well.

4. When administering to a group, it is best to discourage questions of clarification. The questions may "snowball" to the point that responses of individuals are influenced.

5. It is important to present a believable rationale for completing the questionnaire. It is helpful to link the task to some activity or need that is relevant to the respondent (i.e., concerns-based).

When the questionnaire is to be administered in other than face-to-face ways, a cover letter should be attached. The cover letter can introduce the questionnaire, define the innovation, and explain the importance of completing the questionnaire. Instructions about handing in the completed questionnaire can also be included in the cover letter. One important rule to follow in developing a cover letter is to be clear and very brief. A sample cover letter is included in the Appendix.

Scoring the CFSoCQ

Scoring of the questionnaire is a relatively simple process. A computer program (see Appendix C) has been written to score the CFSoCQ and to display the data in a useful format. In addition, the measure can also be handscored, especially convenient when only a small number of questionnaires are being processed. It is especially important to handscore some to verify computer output.

The questionnaire consists of 35 statements, each expressing a certain concern about the innovation. Respondents indicate the degree to which each concern is true of them by marking a number next to each statement on a 0 to 7 scale. High numbers indicate high concern, low numbers low concern, and 0 is indicative of very low concern or completely irrelevant items.

Figure III.2 is a listing of the item numbers and Stage of Concern with which that item is associated.

Figure III.2

Item Numbers and Associated Stages of Concern About Facilitating the Use of the Innovation

Item Number	CF SoC	Item Number	CF SoC	Item Number	CF SoC	Item Number	CF SoC
1	1	10	0	19	6	28	3
2	0	11	2	20	5	29	2
3	5	12	1	21	4	30	1
4	3	13	6	22	0	31	4
5	0	14	3	23	3	32	6
6	4	15	5	24	2	33	5
7	1	16	1	25	0	34	3
8	2	17	2	26	6	35	6
9	5	18	4	27	4		

The 35 statements in the questionnaire were carefully selected to represent seven fundamental areas of concern. Each scale consists of items that are representative of concerns which are prominent at a specific Stage of Concern, according to the concerns theory.

Each of the seven Stages of Concern is represented by five statements. The "raw score" for each scale is simply the sum of the responses to the five statements for that scale. If any items are left blank, compute the average of the items marked, insert the average for the missing responses and calculate the raw score. Figure III.3 is a listing of the item numbers and statements arranged according to Stages of Concern.

Once the seven raw scores have been obtained, it is necessary to convert these to percentile scores, for interpretation. Figure III.4 is a table of raw scale scores and corresponding percentile values for each of the seven Stages of Concern. The Total Score, which is simply the sum of the seven raw scale scores, may also be converted to a percentile scale. Figure III.4 also contains the total scores and corresponding percentile scores.

These percentiles are based on the responses of 589 individuals who completed the questionnaire in 1981. The individuals were a carefully selected sample from elementary and secondary schools and higher education institutions with a range of experience with facilitating a variety of innovations. Experience since has shown that the percentiles in this table are representative of other innovations as well.

Appendix E contains a detailed set of instructions and materials for handscoring the CFSoCQ responses and plotting the profiles. Handscoring is the recommended procedure for small studies; the time and effort involved in computer scoring approximately equals the time of handscoring 50 CFSoCQs.

Displaying CFSoCQ Data

CFSoCQ data can be displayed in different kinds of tables or graphically. The computer program listed in Appendix C provides for two basic displays: The raw scale scores and percentiles are displayed for a set of individuals, and profiles of individuals and groups are presented also.

Graphic representation of the percentile scores greatly assists interpretation of CFSoCQ data. Figure IV.4 on page 34 is an example of such graphing. A blank graph which has been specifically designed for CFSoCQ profile presentations is included in Appendix D. To plot an individual or group profile, simply mark each vertical line at the point representing the percentile score for the appropriate Stage of Concern. Then connect the marks using a pencil and ruler or straightedge. It is recommended that the blank graph be copied so that all the graphs will have the same framework and scale. The computer program provides plotted CFSoC profiles (see Appendix C).

Figure III.3 CFSoCQ -- Items for Each Stage of Concern

Stage 0 Awareness

2. I am more concerned about facilitating use of another innovation.
5. I am not concerned about this innovation at this time.
10. I am preoccupied with things other than this innovation.
22. I spend little time thinking about this innovation.
25. Currently, other priorities prevent me from focusing my attention on this innovation.

Stage 1 Informational

1. I would like more information about the purpose of this innovation.
7. I would like to know more about this innovation.
12. I need more information about and understanding of this innovation.
16. I would like to know what resources are necessary to adopt this innovation.
30. I would like to know where I can learn more about this innovation.

Stage 2 Personal

8. I am concerned about criticism of my work with this innovation.
11. I wonder whether use of this innovation will help or hurt my relations with my colleagues.
17. I want to know what priority my superiors want me to give this innovation.
24. I am concerned about being held responsible for facilitating use of this innovation.
29. I wonder who will get the credit for implementing this innovation.

Stage 3 Management

4. I am concerned because responding to the demands of staff relative to this innovation takes so much time.
14. I am concerned about facilitating use of this innovation in view of limited resources.
23. I see a potential conflict between facilitating this innovation and overloading staff.
28. Communication and problem-solving relative to this innovation take too much time.
34. I am concerned about finding and allocating time needed for this innovation.

Stage 4 Consequence

31. I would like to modify my mode of facilitating the use of this innovation based on the experiences of those directly involved in its use.
6. I am concerned about how my facilitation affects the attitudes of those directly involved in the use of this innovation.
18. I would like to excite those directly involved in the use of this innovation about their part in it.
21. I would like to determine how to enhance my facilitation skills.
27. I am concerned about how my facilitating the use of this innovation affects those directly involved in the use of it.

Stage 5 Collaboration.

3. I would like to develop working relationships with administrators and other change facilitators to facilitate the use of this innovation.
9. Working with administrators and other change facilitators in facilitating use of this innovation is important to me.
15. I would like to coordinate my efforts with other change facilitators.
20. I would like to help others in facilitating the use of this innovation.
33. I would like to familiarize other departments or persons with the progress of facilitating the use of this innovation.

Stage 6 Refocusing

13. I am thinking that this innovation could be modified or replaced with a more effective program.
19. I am considering use of another innovation that would be better than the one that is currently being used.
26. I know of another innovation that I would like to see used in place of this innovation.
32. I have alternate innovations in mind that I think would better serve the needs of our situation.
35. I have information about another innovation that I think would produce better results than the one we are presently using.

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Figure III.4

Raw Score-Percentile Conversion Chart for the Change Facilitator Stages of Concern Questionnaire

Five Item Raw Scale Score Total	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Total Raw Score	Percentile
0	0	0	0	0	0	0	0		
1	1	2	1	1	0	0	1	1-42	3
2	2	3	2	1	0	0	3	43-55	6
3	4	5	4	2	1	0	5	56-60	9
4	7	8	7	2	1	0	8	61-66	12
5	14	13	12	5	1	0	13	68-72	15
6	22	18	18	8	1	1	18	73-74	18
7	31	21	24	11	1	1	23	75-78	21
8	40	26	30	15	2	2	31	79-80	24
9	48	30	34	19	2	3	39	81-83	27
10	55	34	39	22	2	3	47	84-86	30
11	61	37	43	26	2	4	55	87-89	33
12	69	40	49	30	2	5	63	90-92	36
13	75	43	56	35	3	7	68	93-95	39
14	81	46	62	40	3	8	75	96-98	42
15	87	49	68	44	4	9	81	99-101	45
16	91	53	73	50	5	12	86	102-104	48
17	94	56	77	55	6	15	89	105-107	51
18	96	59	79	60	7	18	90	108-110	54
19	97	61	81	66	9	21	92	111-112	57
20	98	64	84	71	11	24	95	113-114	60
21	99	66	87	74	13	28	96	115-118	63
22	99	69	89	78	16	32	97	119-122	66
23	99	72	91	82	20	36	97	123-125	69
24	99	76	93	86	27	40	98	126-127	71
25	99	79	95	89	33	43	98	128-132	74
26	99	81	97	91	39	48	99	133-136	77
27	99	84	98	93	46	54	99	137-141	80
28	99	87	99	94	54	60	99	142-144	83
29	99	89	99	94	62	67	99	145-150	86
30	99	92	99	95	68	72	99	151-156	89
31	99	94	99	96	74	77	99	157-161	92
32	99	96	99	97	82	82	99	162-173	95
33	99	98	99	98	87	85	99	174-189	98
34	99	99	99	99	91	91	99	191-245	99
35	99	99	99	99	97	97	99		

Interpretation of the percentile scores is explicated in this manual in the next section. When scores are used in statistical analyses, we strongly encourage the use of the raw scores. Conversion to percentiles greatly affects the distribution of the scores (tending to make the distribution rectangular), making statistical assumptions more tenuous than would otherwise be the case.

SECTION IV

INTERPRETATION OF CFSoC QUESTIONNAIRE DATA

Once collected and processed, CFSoCQ data can be interpreted at several different levels of detail and abstraction. The simplest form of interpretation is to identify the high stage score (peak stage score interpretation). A more detailed interpretation can be developed by examining both the high stage score and the second highest stage score (first and second high stage score interpretation). The most sensitive interpretation can be developed by analyzing the complete profile (profile interpretation). By examining the percentile scores for all seven stages and interpreting the meaning of the different highs and lows and their interrelationships, a very rich clinical picture can be developed.

Interpretation of profiles will require some study and practice; however, the process in general is fairly easy to understand for those who have a clinical bent. For those who want a quick and relatively simple method, the straightforward quantitative interpretation of high and second high scores, which relies heavily on the definition of the various stages, will probably be most useful.

Regardless of the interpretation procedure, caution must be taken in accepting an interpretation as the final truth. We repeat, "the interpretations that are made are only as good as the measure, the genuineness of the responses made by the respondents, and the skill of the interpreter." Therefore, all interpretations must be treated as hypotheses. Ideally, of course, all interpretations would be made in consultation with the respondents. Confirmation or rejection should then be used to adjust and adapt the hypothesis before deciding on the interventions that should be made.

Regardless of whether or not individual interpretations are made, group data can provide useful information and generally appropriate interventions can be selected based on group data. Interpretation of the peak scores, the second highest score, and profiles all can be done with individual or group data. Obviously, the larger the group the less sensitive to the individual differences the interpretation will be. With any of these methods, the resultant interpretation can be compared with the demographic data items. Also, having additional information about the specific role of the change facilitator in a particular situation can help explain why certain stages of concern are more or less intense.

This section of the manual is divided into subsections that deal in depth with each of the interpretation procedures. Sample data and analyses are presented. The discussion unfolds from the simplest analysis to more complex. By beginning with the straightforward procedures as outlined, a full description of the concerns of the respondent or respondents can be developed. The more intricate assessments that are described can be mastered with experience and by checking out hypothesized interpretations with respondents.

Peak Stage Score Interpretations

The procedure for analyzing CFSoCQ data based upon peak scores is basically the same for individual and group data. Each stage percentile score can be listed as illustrated in Figure IV.1. From this listing, the highest stage scores for each individual, or a group, can be identified. In dealing with a listing of percentile scores, sometimes it is useful to examine the individual listings and circle the highest stage score for each individual, as has been done in Figure IV.1. Occasionally another stage score will be within one to three percentile points, in which case both can be circled.

Figure IV.1 Example of Identifying High Stage Scores

	0	1	2	3	4	5	6
1)	61	72	62	66	(82)	60	55
2)	61	59	68	74	68	(77)	75
3)	55	53	56	40	(62)	54	23
4)	75	(76)	49	66	46	40	39
5)	55	(61)	43	50	27	48	39
6)	14	40	37	30	87	(91)	90
7)	61	53	49	(93)	33	48	23
8)	69	(76)	68	71	74	72	68
9)	81	81	87	(89)	82	77	75
10)	81	84	89	82	74	85	(92)
11)	20	49	34	60	(68)	60	47
12)	(69)	61	56	60	54	60	47
13)	91	89	(97)	95	74	60	77
14)	48	56	56	66	62	(72)	55
15)	48	49	56	(74)	46	54	55
16)	22	40	34	(55)	39	21	18
	57	62	59	(67)	61	61	55

Percentile Means

N = 16

Interpretation of the highest score is based directly on the definitions of the Stages of Concern about facilitating the use of the innovation. They are presented in Figure II.1 on page 16. The stage scores are directly related to the stage definitions with the relative intensity of each stage indicated by the percentile score. The higher the score, the more intense the concerns at that stage.

One point of clarification related to Stage O, Awareness, should be noted. A high Stage O score indicates that the facilitator currently has intense concerns about a number of other things besides the innovation being dealt with in the CFSoCQ. In other words, competing demands to the innovation are of high priority or concern. A low score indicates that facilitating use of the innovation is of priority.

In interpreting concerns profiles, "higher" and "lower" are not absolute, but rather are relative to the other stage scores in that profile. Thus, a 55th percentile for one person may represent his/her highest stage score, and therefore his/her most intense stage of concern. While a 55th percentile stage score for another person may represent his or her lowest stage of concern.

Interpretation, therefore, is based on the "shape" of the profile rather than how high or low it falls on the graph. Figure IV.1 can be used to illustrate other interpretations and procedures. For example, the highest stage of concern for individuals 1, 3, and 11 is Stage 4. This indicates that the change facilitator is concerned about his/her facilitating skills and how they affect the users of the innovation, those most directly involved with the implementation.

Group Data

There are two recommended ways to treat group data. One way, illustrated in Figure IV.2 is to tally the number of individuals that are high on each stage. This gives a clear picture of the range of the peak scores within a group. One-fourth of the sample (four people) have highest concerns about management (Stage 3). The need for more information about the innovation (Stage 1) is the highest concern for three respondents.

Figure IV.2 Frequency of Highest Concerns Stage for the Individuals Displayed in Figure IV.1

Highest Stage of Concern About Facilitating the Use of the Innovation (N=16)

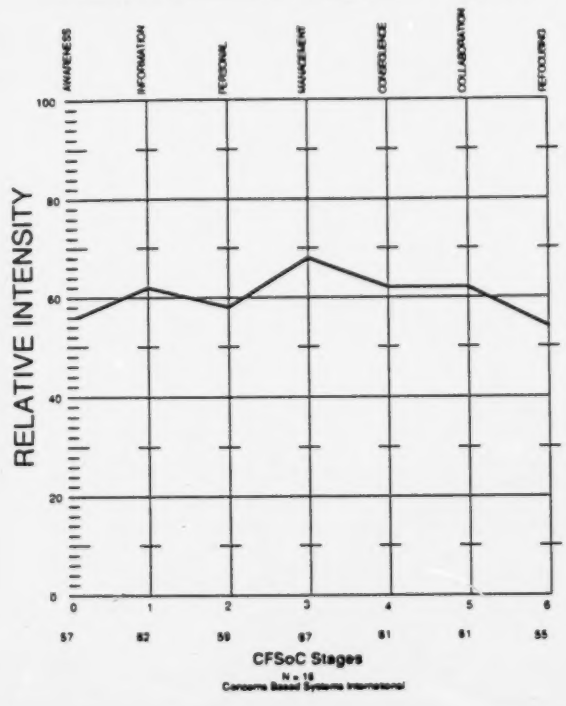
Stage	0	1	2	3	4	5	6
Number of Individuals	1	3	1	4	3	3	1

Another way to treat group data is to aggregate individual data by developing a profile that presents the mean scores for each stage for the individuals in a group such as a school faculty or the various departments of a college. This is illustrated in Figure IV.3. It should be noted that the more individuals that are aggregated, the less likely the mean is to be representative of individual scores. The sample profile illustrated in Figure IV.3 is quite flat, which usually indicates greater variation in individuals.

Normally, the group averages will reflect the dominant high and low stages of concern of the composite group; however, the individual highs should also be checked in case there are distinct subgroups. This is where the first treatment of group data, the frequency count of high stage scores, is beneficial. Keep in mind that averaging individual data tends to smooth out any high peak and low valley trends.

Look at the profile (Figure IV.3) represented by the individuals in Figure IV.1. It seems that the profile is almost smooth in that all percentiles are in the range of the 50s and 60s. Note, however, that Stage 3 concerns are noticeably higher than Stage 0 or Stage 6. One useful ground rule is that a difference of ten (10) or more percentile points is usually significant. Other stages are somewhat lower than Stage 3, but not drastically so.

Figure IV.3 Group Profile of Change Facilitators' Stages of Concern



Double Peak Score Interpretation

As mentioned earlier, in order to develop additional insight into the dynamics of concerns, the second high stage score along with the peak stage score can be analyzed. This analysis can be done with individual or group data.

Assuming the developmental nature of concerns, the second highest stage of concern will often be adjacent to the highest stage of concern. That is, if an individual is high on Stage 3, she/he will frequently be second highest on Stage 2 or Stage 4. By looking at the second highest stage of concern, the presence or absence of this general pattern can be assessed.

Across a group, however, there are bound to be individuals who do not conform to the general pattern. There could be individuals who are highest on Stage 3 and second highest on Stage 6, or high on Stage 4 and second highest on Stage 1. Although some of the possible combinations are not usual, all are conceivable. Analysis of the second high stage score for an individual is also reasonably straightforward. For example, in Figure IV.1 the sixth individual listed was highest on Stage 5 and second highest on Stage 6. This individual is intensely concerned about working with others (her/his colleagues) who are involved with facilitating the implementation of the same innovation (Stage 5). Also, he/she may be thinking of alternatives to the innovation itself or its use in combination with other innovations (Stage 6).

A not unusual high-second-high combination is a person highest on Stage 1 and second highest on Stage 2 or vice versa. Individuals with this combination are concerned about getting more information (Stage 1) and also concerned about uncertainties related to becoming successful and valued as a change facilitator (see definition Stage 2).

The richest and perhaps most profitable interpretation of concerns data is entailed in the more complete profile analysis. The next section deals in more detail with profile interpretation.

Profile Interpretations

As individuals move from little concern about facilitating use of an innovation into actively becoming involved with users as a facilitator, it is hypothesized that their concerns develop from being most intense at Stages 0, 1, and 2, to most intense at Stage 3, and ultimately to most intense at Stages 4, 5, and 6. This is most likely to occur if the innovation is a positive one and there is administrative support for its implementation. In theory, the profiles of an individual's concern about facilitating use of an innovation when plotted over time should form an approximate wave motion from left to right as illustrated in Figure I.4. However, reality has a way of intervening on this idealized trend,

which results in different and interesting profiles. Where an individual is in this change process can best be assessed through interpretation of a complete concerns profile. Analyzing both the tabular listing of percentile scores, and the plots of these percentile scores as a graph provides the most complete clinical interpretation/ assessment.

By use of clinical interpretation techniques, an interpreter can develop a great deal of insight into the type or types of concerns that is/are most intense and least intense. Here again, interpretation of profiles, whether it be for individual or group data, is based upon the stage definitions presented in Figure II.1. In this subsection, typical CFSoCQ profiles are first introduced and discussed, and then a set of rules for interpretation is presented. In addition to looking at profiles, responses to individual items is discussed as a further check. The fullness of the picture that can be developed depends to a great extent upon use of the stage definitions and accumulating experience in receiving respondent feedback.

In Figures IV.4 - IV.10 sample CFSoCQ profiles are presented. In the text that follows below, and at the bottom of each profile, are sample interpretations. With any profile, interpretation begins with identifying the peaks and valleys. These points can be interpreted by referring back to the Stage definitions. Relatively high points indicate more concern, low points indicate an absence of concern. The analysis of any profile can be further enriched by referring to answers on the demographic page and through discussion with the respondents.

Typical CFSoCQ Profiles

Figure IV.4: Concerns About Other Things

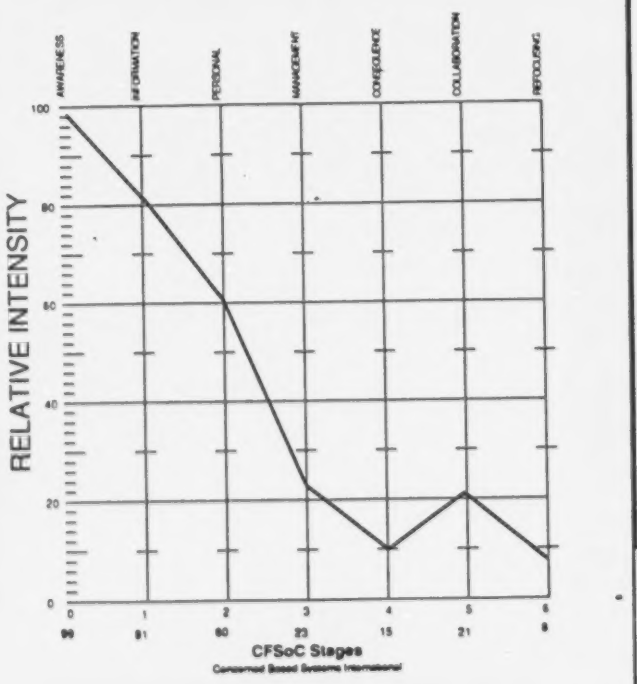
One of the readily identifiable concerns profile is that of a person who is considering his/her potential or possible involvement as change facilitator, or is just barely beginning to be involved as a facilitator of the innovation addressed. She/he may begin to think about what may be in store for him/her as a change facilitator. In such a situation, his or her concerns are likely to be highest on Stages 0, 1, and 2 and lowest on Stages 4, 5, and 6. There is some variation in the amount of intensity of these concerns, depending on the innovation and whether or not it is a school or college setting; however, the general shape of the pattern is as plotted in Figure IV.4. The high stage 0 point is an indicator that the respondent has a lot of other things on their mind besides the innovation.

The slight "blip" up on Stage 5 is typical too. Normally facilitators need to link with other facilitators or administrators. This condition of the role typically shows up in some intensity of concern on Stage 5.

Profiles of these minimally involved change facilitators typically indicate high Stage 0 scores, which vary from being the highest to being the second or third highest. In general, either Stage 0, 1, or 2 is the highest score. Smaller variations in Stage 0 do not seem to be as important as do the variations in Stages 1 and 2. It is important to check closely for the relative differences in the concerns of change facilitators who are not yet in the trenches.

Figure IV.4

Concerns About Other Things and Wanting to Know More About this Innovation



Definition -- Stage 0, Awareness:

Change facilitation in relating to the innovation is not an area of intense concern. The person's attention is focused elsewhere. (High Stage 0 indicates that relatively little thought or concern is focused on the innovation or facilitating its use, at this time.)

** Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comment

This same profile could exist with a low Stage 0, which would indicate that the person has the innovation as a high priority.

Figure IV.5: Informational Concerns, With Doubt?

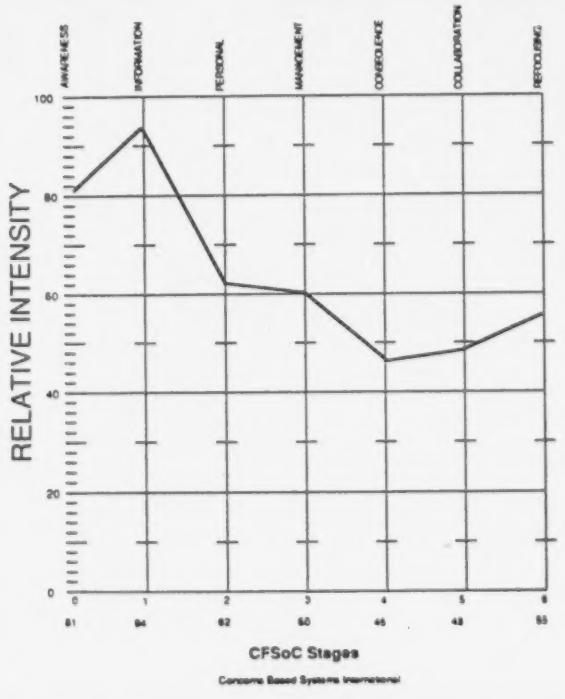
The profile illustrated in Figure IV.5 is that of an interested individual who is somewhat aware of and concerned about the innovation. This individual is interested in learning more about the innovation (Stage 1). The individual at this time does not have intense management concerns (medium intensity, Stage 3) and at this time is minimally concerned at Stages 4 and 5. The low Stage 6 score suggests that the individual does not have ideas about other approaches that would be potentially competitive with the

innovation. The overall profile suggests and reflects the interested, positively disposed, but a person who has other things besides the innovation that are of concern.

This person has high concerns on Stages 0 and 1. The person has a number of other things they are concerned about (Stage 0) at this time, and they would like to know more about this innovation (Stage 1). They are not intensely concerned about support for them as a facilitator (Stage 2), the time it will take to facilitate (Stage 3), improving their impact (Stage 4), or about working with other facilitators to increase impact (Stage 5). There is some doubt about this innovation or thought of turning to another alternative innovation (Stage 6).

Figure IV.5

Profile Focused on Informational Concerns



Definition -- Stage 1, Information **

There is interest in learning more about the innovation. The concern is not self-oriented or necessarily change facilitation oriented. The focus is on the need/desire to know more about the innovation, its characteristics, its use and effects.

** Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comment

This respondent is intensely interested in gaining more information about the innovation (Stage 1). There is indication that s/he has other things on his/her mind (Stage 0). S/he does wonder some about how it will effect him/her, and there is some uncertainty about skills and management (Stage 2 and Stage 3), but these concerns are lower in intensity.

The "tailing-up" of Stage 6 concerns on the profile of a potential or active change facilitator provides further information about the feelings of the respondent towards the innovation. When Stage 6 tails off or down at the end, this generally means that the respondent does not have ideas about other ways that would potentially compete with the innovation. However, when Stage 6 concerns "tail up", one can infer that the respondent

has other ideas that she/he sees as having more merit than the innovation as it is currently defined. Any tailing-up of Stage 6 concerns on a profile should be noted. There may be resistance to the innovation on the part of the respondent. A more severe tailing-up of 6 when Stages 2 and/or 3 are very high should be heeded as a loud announcement that the responder has their own ideas about what should be done.

Since the Stage 0 score is high and the Stage 1 score is very high, it is clear that this person has a number of other tasks that are higher priority and it would appear that they know very little about the innovation. Also, it appears that they are not anticipating conflict in their facilitator role with it (lower Stage 2). One should keep in mind the possibility of some resistance to the innovation, based on the tailing up of Stage 6.

Profiles of these minimally involved change facilitators typically indicate high Stage 0 scores, which vary from being the highest to being the second or third highest. In general, either Stage 0, 1, or 2 is the highest score. Again, smaller variations in Stage 0 do not seem to be as important as do the variations in Stages 1 and 2.

In summary, the profile illustrated in Figure IV.5 is that of an interested individual who is somewhat aware of and concerned about the innovation (Stage 1). This individual is interested in learning more about the innovation. The individual at this time does not have intense management concerns (medium intensity, Stage 3) and at this time is minimally concerned at Stages 4 and 5. The Stage 6 score suggests that the individual does not have ideas about other approaches that would be strongly competitive with the innovation. The overall profile suggests and reflects the interested, positively disposed, but a person who has other things besides the innovation that are of concern.

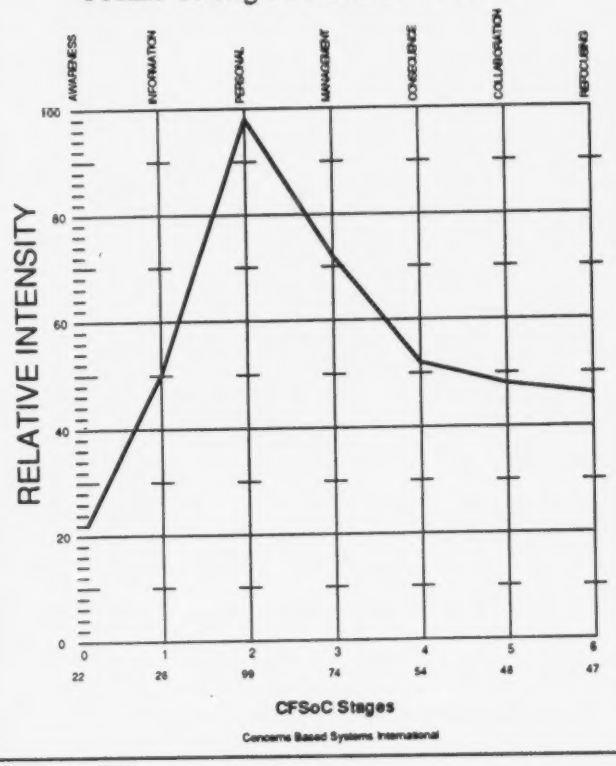
In contrast to Figure IV.5, Figure IV.6 represents a profile depicting various degrees of doubt and possible resistance to being a change facilitator.

Figure IV.6: High Personal Concerns

This profile can be clearly identified in what is referred to as the "one/two split." When the Stage 2 concerns are equal to or more intense than the Stage 1 concerns, the innovation and the facilitator roles are perceived much differently than in the previous illustration. In general, when such a one/two split occurs, the higher personal concerns (Stage 2) override concerns about learning more about the innovation (Stage 1). The individual is much more concerned about his/her personal position and well being in relation to being a change facilitator (Stage 2). This person is not as interested in learning more of a substantive nature about the innovation (Stage 1). Experience has shown that even when general, nonthreatening attempts are made to discuss the change process or the innovation with a person with this profile (Figure IV.6), the high Stage 2 concerns can be further intensified. Normally Stage 2 concerns have to be reduced before this individual can look at the proposed innovation objectively.

Figure IV.6

Profile of High Personal Concerns



Definition -- Stage 2, Personal:

Uncertainty about one's ability and role in facilitating use of the innovation is indicated. Doubts about one's adequacy to be an effective change facilitator and questions about institutional support and rewards for doing the job are included. Lack of confidence in oneself or in the support to be received from superiors, nonusers, and users are a part of this stage.

** Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comments

Clearly, this respondent has self concerns about their image, skill and role as a change facilitator (Stage 2). These concerns are intense and dominant. Stage 3, second highest concern, gives a clue that managing the change facilitator role is of some concern and may contribute to some of the high personal concerns.

Typical Experienced Change Facilitators' Profile

Generally profiles of experienced change facilitators show high scores on some combination of Stages 3, 4, 5, and 6. In general, profile interpretations can be based heavily upon the definition of the stage that has the highest score (see definitions). In many cases, the second highest score is more than 20 percentile points below the highest, and normally does not indicate very intense concerns of the respondent at that stage. If certain stage scores are dramatically low, then these are areas where individuals are reporting that they have minimal or no concerns at the time.

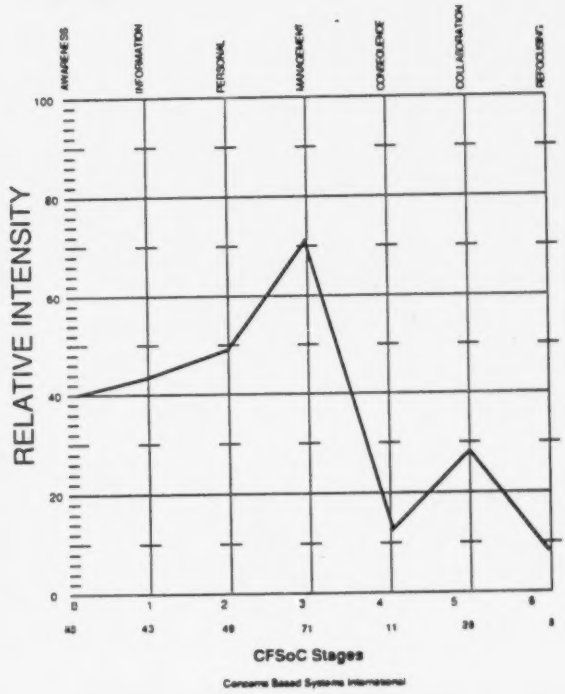
Figure IV.7: High Management Concerns

In Figure IV.7, for example, Stage 3 management concerns are relatively intense. The respondent is indicating high concern about the logistics, time and other managerial problems related to being a change facilitator. The relatively low Stage 0 concerns suggests

that facilitating use of this innovation is of high priority to this person. The slight Stage 5 indicates some concern about working with others. The low Stage 6 indicates that the person is committed to this innovation and not thinking about alternatives.

Figure IV.7

Primary Management Concerns



Definition -- Stage 3, Management:

The time, logistics, available resources, and energy involved in facilitating others in use of the innovation are the focus. Attention is on the "how to do its" of change facilitation, decreasing the difficulty of managing the change process and the potential of overloading staff.

** Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comments

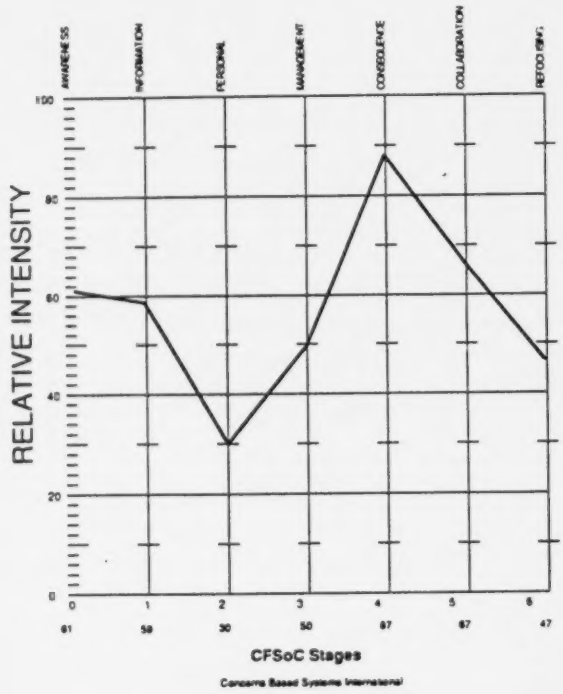
Management concerns are moderate; however, for this individual they are the very highest concerns. Other concerns are far behind. Even so, it is important to observe that self-concerns are second highest. As long as Stage 2 and Stage 3 are the highest concerns, impact concerns (especially Stage 4 and Stage 5) are not likely to increase.

Figure IV.8: Impact Concerns About Ones Facilitator Style

The respondent in Figure IV.8 has most intense Stage 4 concerns, that is, he or she is most intensely concerned about the impact of his/her facilitation efforts upon those s/he is trying to help. The lower Stage 5 and Stage 3 concerns suggest that s/he is not very concerned about management as a change facilitator nor about working with other facilitators to increase effects. The Stage 0 score could indicate that there are some other innovations and tasks that are of concern and requiring some attention.

Figure IV.8

One's Impact as a Facilitator



Definition -- Stage 4, Consequences:

Attention is on improving one's own approach for change facilitation and increasing positive innovation effects. Increasing the effectiveness of users and analyzing the effects on clients are the foci. Expanding his/her facility and style for facilitating change is also the focus.

** Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comments

The second highest concern is far less intense than Stage 4 concerns. Nevertheless, Stage 5 concerns (collaboration) are significantly higher than personal concerns (Stage 2) and management concerns (Stage 3). The concerns about the innovation itself (Stage 6) indicate that the respondent is not yet thinking of alternatives to or changes in the innovation. The Stage 1 score indicates that the respondent has some interest in learning more about the innovation. Most likely, s/he is an expert already but open to learning more. S/he is focused on improving his/her facilitating skills for positive effects (Stage 4).

Figure IV.9: Impact Concerns About Collaboration

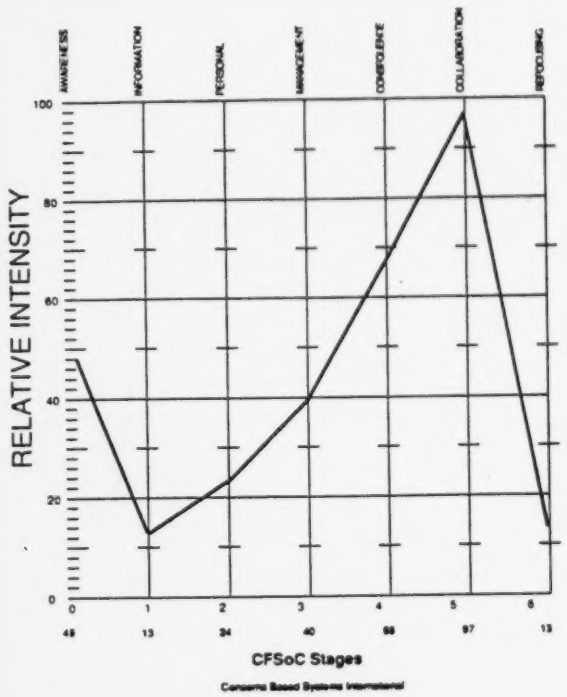
A high Stage 5 concerns profile respondent, as illustrated in Figure IV.9, is heavily concerned about working with his/her colleagues or others who are change facilitators. The concern is on working together to make a bigger difference. This profile is typical of many administrators who spend a great deal of their time coordinating the work of others. In contrast to this profile, are other full-time administrators who tend to have much lower Stage 4 concerns. The profile in Figure IV.9, also reflects relatively intense concerns (Stage 4) about how their facilitation of the innovation effects direct users.

The second high Stage 4 score indicates a facilitator who is focused on the impact of their facilitator activities. S/he is concerned about making a difference with the innovation users (i.e. teachers) and their affects on clients (i.e. children). Probably this change facilitator has already resolved concerns at Stages 1, 2, and 3. By checking the demographic page, the interpreter will know whether or not the respondent has the role of an administrator, staff developer or some other leader role. This additional information

may help understanding and interpretation. Here again, the basic interpretation is straightforward with a high Stage 5 score indicating that the individual is most concerned about coordination with other change facilitators so that together they can better facilitate implementation of the innovation (see comments Figure IV.9).

Figure IV.9

High Concerns About Collaboration



Definition -- Stage 5, Collaboration:

Coordinating with other change facilitators and/or administrators to increase one's capacity in facilitating use of the innovation is the focus. Improving coordination and communication for increased effectiveness of the innovation are the foci. Issues related to involving other leaders in support of and facilitating use of the innovation for increased impact are indicated.

•• Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comments

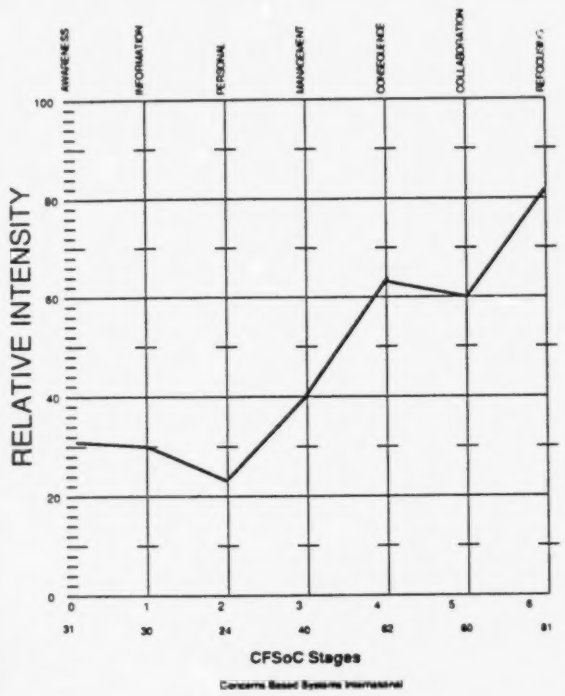
Clearly this person is highly concerned about collaboration (Stage 5). Keep in mind that the role of the respondent may affect concerns. For instance, if this respondent is an "in the trenches day-to-day consultant" s/he may have already dealt with management concerns and is now focused on impact concerns. If, on the other hand, the respondent supports the innovation as a policy maker s/he may have been primarily concerned about collaboration (Stage 5) from the beginning.

Figure IV.10: Impact Concerns with Refocusing

The facilitator depicted in the profile shown in Figure IV.10 has intense refocusing concerns (Stage 6) coupled with second high impact concerns in Stage 4 (Consequences) and Stage 5 (Collaboration). Most likely this is a facilitator who has had a great deal of experience with the innovation and is now considering alternative forms or replacement of the innovation for the purposes of improving outcomes.

Figure IV.10

High Refocusing Concerns, Impact Concerns



Definition -- Stage 6, Refocusing:

Ideas about alternatives to the innovation are a focus. Thoughts and opinions oriented toward increasing benefits to clients are based on substantive questions about the maximum effectiveness of the present innovative thrust. Thought is being given to alternative forms or possible replacement of the innovation.

Stages 1 and 6 focus on the innovation; other stages focus more on the facilitation role.

Comments

Impact concerns (Stage 4, Stage 5, and Stage 6) dominate this profile. This respondent, with some concerns about improving his/her facilitating role (Stage 4) and about working with others to facilitate impact (Stage 5), is thinking about the innovation per se. He/she is thinking about alternatives to, modification of, or even replacement of the innovation to further enhance impact with clients (Highest Stage 6).

SECTION V

LIMITATIONS AND RESTRICTIONS

The most important restriction regarding the CFSoCQ relates to the purpose for its use. The questionnaire was designed for and is intended to be used strictly for diagnostic purposes for personnel involved in facilitating the "adoption" or implementation of an innovation. It should not be used for purposes of screening or evaluation. Concerns are neither good nor bad, and it is inappropriate to analyze them in those terms. Knowing that one individual has high Stage 3 concerns and another is high on Stage 4 does not mean that one individual is somehow better than the other. It only means that, in relation to the innovation in question, the kind of assistance that would be helpful to the two persons is different.

Personality assessment cannot be accomplished with the CFSoCQ and no attempt should be made to do so. The instrument measures the concerns of individuals, at a particular time, about specific innovations, and their role in implementation. Concerns are natural, healthy phenomena that should not be equated with personality strengths or flaws.

It may be tempting to modify one or more of the questionnaire items to better address a particular situation or need. Do not succumb to this temptation. Even the slightest modification of the CFSoCQ could result in invalidation of the scoring and norming standards and ultimately to misinterpretation of the results. The authors assume no responsibility for the reliability or validity of the measure if any of the 35 questionnaire items are altered in any way.

Interpretation of the data can only be as good as the respondent was conscientious in completing the CFSoCQ and the interpreter is in developing hypotheses. As noted in earlier sections, interpretations should be treated as hypotheses and confirmed with the respondents rather than accepted as fact.

The items are known to work with those new to the role of change facilitator and those who are experienced "old hands." Depending on their frame of reference, individuals often will identify specific items that are not appropriate for them, or they will point out that the "innovation" is really not new for them and that they do not think of it as an

innovation. Gratefully accept their feedback; it has been our experience that their responses will still be appropriate and will reflect their concerns.

A final note about data analyses. We expect some adventurous souls will take it upon themselves to devise a "better" scoring system for the CFSoCQ. We welcome improvements. However, be advised about what the measure was developed to do. If a measure is needed for some other purpose, then make the effort to develop a new measure that is designed to meet that purpose. And most importantly, the CFSoCQ should not be administered to a small sample of innovation users and a factor analysis performed on their data. The results will most assuredly be factors that load the items heavily on one or two of the present CFSoCQ stages and that do not distinguish the other stages. A large stratified sample of change facilitators with roles internal and external to the implementation site is required if a factor analytic approach is to be meaningful. Another example, it is highly unlikely that a sample change facilitators in one district all working with the same innovation will include individuals that represent intense concerns for each of the seven stages.

One other point. Be careful about inferring "use" and "nonuse" from this questionnaire. Paper pencil measures can assess affective variables. This method is not good for determining performance. Use the Stages of Concern as defined. Obtaining other information requires the use of other techniques.

With consideration of these limitations and restrictions, it is highly likely that the CFSoC Questionnaire will provide valuable data to those interested in researching and facilitating change. Problems and questions should be addressed to the authors of this manual.

Reference List

Barucky, J. M. (1984). Identification and measurement of the personal leadership development concerns of Air Force officers, cadets, and trainers participating in Air Force professional military education programs. Unpublished doctoral dissertation. The University of Texas at Austin.

Fuller, F. F., & Bown, O. H. (1975). Becoming a teacher. In Teacher Education 1975, 74th Yearbook of the National Society for the Study of Education. Chicago National Society for the Study of Education.

Fuller, F. F. (1969). Concerns of teachers: A developmental conceptualization. American Educational Research Journal, 6(2), 207-226.

Fuller, F. F. (1970). Personalized education for teachers: An introduction for teacher educators. Austin: Research and Development Center for Teacher Education, The University of Texas.

Fuller, F. F., and Case, C. (1972). A manual for scoring the teacher concerns statement. Austin: The University of Texas at Austin, Research and Development Center for Teacher Education. (ERIC Document Reproduction Service No. ED 079 361)

George, A. A. (1978). Measuring self, task, and impact concerns: A manual for use of the teacher concerns questionnaire. Austin, TX: The Research and Development Center for Teacher Education, The University of Texas at Austin. (ERIC Document Reproduction Service No. ED 175 845)

George, A. A., Borich, G. D., & Fuller, F. F. (1974). Progress report on the teacher concerns checklist. Austin, TX: Research and Development Center for Teacher Education, The University of Texas.

Hall, G. E. (1979). The study of teacher concerns and consequent implications for staff development. Staff Development Newsletter. National Staff Development Center.

Hall, G. E. (1979). The concerns-based approach to facilitating change. Educational Horizons, Summer, 57(4), 202-208. Austin, TX: Research and Development Center for Teacher Education, The University of Texas. (ERIC Document Reproduction Service No. ED147)

Hall, G. E. & Jones, H. L. (1976). Competency-based education: A process for the improvement of education. New Jersey: Prentice-Hall, Inc.

Hall, G. E., George, A. A., & Rutherford, W. L. (1979). Measuring stages of concern about the innovation: A manual for use of the SoC questionnaire. Austin: The University of Texas at Austin, Research and Development Center for Teacher Education. (ERIC Document Reproduction Service No. ED 147 342)

Hall, G. E. & Hord, S. M. (1987). Change in schools: Facilitating the process. New York: State University of New York Press.

Hall, G. E. & Loucks, S. F. (1978). Innovation configurations: Analyzing the adaptations of innovations. Austin: The University of Texas at Austin, Research and Development Center for Teacher Education.

Hall, G. E. & Loucks, S. F. (1978, September). Teacher concerns as a basis for facilitating and personalizing staff development. Teachers College Record, 80(1), 36-53.

Hall, G. E., & Rutherford, W. L. (1976). Concerns of teachers about implementing team teaching. Educational Leadership, 34(3), 227-233.

Hall, G.E., Rutherford, W. L., Hord, S. M., & Huling, L. L. (1984, February). Effects of three principal styles on school improvement. Educational Leadership, pp. 22-29.

Hall, G.E., Rutherford, W. L., & Griffin T. H. (1982). Three change facilitator styles: Some indicators and a proposed framework. Austin: The University of Texas at Austin, Research and Development Center for Teacher Education. (ERIC Document Reproduction Service No. ED 220 961)

Hall, G. E., Wallace, R. C. Jr. & Dossett, W. A. (1973). A Developmental conceptualization of the adoption process within educational institutions (Report No. 3006). Austin: The University of Texas at Austin, Research and Development Center for Teacher Education. (ERIC Document Reproduction Service No. ED 095 126)

Hardy, G. (1978). The impact the concerns of cooperating teachers have on the concerns of student teachers. (Doctoral dissertation, University of Houston, 1977). Dissertation Abstracts International, 38A, 7279A-7280A.

Hardy, G. (1978). The cooperating teacher: A most critical factor in teacher education. Paper presented at the annual meeting of the American Educational Association, Toronto, Canada.

James, R. K., & Hall, G. E. (1981). A study of the concerns of science teachers regarding an implementation of ISCS. Journal of Research in Science Teaching, 18(6), 479-487.

Jordan-Marsh, M. (1985). Development of a tool for diagnosing changes in concern about exercise: A means of enhancing compliance. Nursing Research, April, 34(2).

Kolb, S. E. (1983). Development and application of a questionnaire for assessing stages of concern among nurses. Unpublished doctoral dissertation, The University of Texas at Austin.

Martin, J. B. (1989). Measuring the stages of concern in the development of computing expertise. Unpublished doctoral dissertation, The University of Florida.

Newlove, B. W. & Hall, G. E. (1976). A manual for assessing open-ended statements of concern about an innovation. Austin: The University of Texas at Austin, Research and Development Center for Teacher Education. (ERIC Document Reproduction Service No. ED 144 207)

Van den Berg, R. M. & Vandenberghe, R. (1981). Onderwijsinnovatie in verschuivend perspectief. Amsterdam: Uitgeverij Zwijsen.

Zeichner, K. & Teitlebaum, K. (1982). Personalized and inquiry-oriented teacher education. Journal of Education for Teaching, 8, 95-117.

APPENDIX A

Sample CFSoC Questionnaire

CFSoCQ

Concerns Questionnaire for Change Facilitators

Name _____

or

Last four digits of your Social Security No. _____ _____ _____ _____

The purpose of this questionnaire is to determine what you are thinking about regarding your responsibilities as a change facilitator for an innovation. It is not necessarily assumed that you have change facilitator responsibilities. This questionnaire is designed for persons who do not serve as change facilitators as well as for those who have major responsibility for facilitating change. Because the questionnaire attempts to include statements that are appropriate for widely diverse roles, there will be items that appear to be of little relevance or irrelevant to you at this time. For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For example:

This statement is very true of me at this time.	0 1 2 3 4 5 6 (7)
This statement is somewhat true of me now.	0 1 2 (3) 4 5 6 7
This statement is not at all true of me at this time.	0 (1) 2 3 4 5 6 7
This statement seems irrelevant to me.	(0) 1 2 3 4 5 6 7

Please respond to the items in terms of your present concerns, or how you feel about your involvement with facilitating _____ (please specify the innovation). We do not hold to any one definition of this program, so please think of it in terms of your own perceptions of what it involves. Remember to respond to each item in terms of your present concerns about your involvement or potential involvement as a facilitator of the above-named innovation.

Thank you for taking time to complete this task. Please feel free to write any comments, reactions, or questions you may have about the items on the questionnaire. Also, use the last page to express any additional concerns you have about the innovation or this questionnaire.

Reference:
Hall, G. E., Newlove, B. W., George, A. A., Rutherford, W. L. & Hord, S. M. (1991). Measuring Change Facilitator Stages of Concern: A Manual for the Use of the CFSoCQ Questionnaire. Greeley, CO: Center for Research on Teaching and Learning., University of Northern Colorado.

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0	1	2	3	4	5	6	7
Irrelevant	Not true of me now		Somewhat true of me now			Very true of me now	

1.	I would like more information about the purpose of this innovation.	0 1 2 3 4 5 6 7
2.	I am more concerned about facilitating use of another innovation.	0 1 2 3 4 5 6 7
3.	I would like to develop working relationships with administrators and other change facilitators to facilitate the use of this innovation.	0 1 2 3 4 5 6 7
4.	I am concerned because responding to the demands of staff relative to this innovation takes so much time.	0 1 2 3 4 5 6 7
5.	I am not concerned about this innovation at this time.	0 1 2 3 4 5 6 7
6.	I am concerned about how my facilitation affects the attitudes of those directly involved in the use of this innovation.	0 1 2 3 4 5 6 7
7.	I would like to know more about this innovation.	0 1 2 3 4 5 6 7
8.	I am concerned about criticism of my work with this innovation.	0 1 2 3 4 5 6 7
9.	Working with administrators and other change facilitators in facilitating use of this innovation is important to me.	0 1 2 3 4 5 6 7
10.	I am preoccupied with things other than this innovation.	0 1 2 3 4 5 6 7
11.	I wonder whether use of this innovation will help or hurt my relations with my colleagues.	0 1 2 3 4 5 6 7
12.	I need more information about and understanding of this innovation.	0 1 2 3 4 5 6 7
13.	I am thinking that this innovation could be modified or replaced with a more effective program.	0 1 2 3 4 5 6 7
14.	I am concerned about facilitating use of this innovation in view of limited resources.	0 1 2 3 4 5 6 7
15.	I would like to coordinate my efforts with other change facilitators.	0 1 2 3 4 5 6 7
16.	I would like to know what resources are necessary to adopt this innovation.	0 1 2 3 4 5 6 7

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A-2

0	1	2	3	4	5	6	7
Irrelevant	Not true of me now		Somewhat true of me now			Very true of me now	

17.	I want to know what priority my superiors want me to give this innovation.	0 1 2 3 4 5 6 7
18.	I would like to excite those directly involved in the use of this innovation about their part in it.	0 1 2 3 4 5 6 7
19.	I am considering use of another innovation that would be better than the one that is currently being used.	0 1 2 3 4 5 6 7
20.	I would like to help others in facilitating the use of this innovation.	0 1 2 3 4 5 6 7
21.	I would like to determine how to enhance my facilitation skills.	0 1 2 3 4 5 6 7
22.	I spend little time thinking about this instruction.	0 1 2 3 4 5 6 7
23.	I see a potential conflict between facilitating this innovation and overloading staff.	0 1 2 3 4 5 6 7
24.	I am concerned about being held responsible for facilitating use of this innovation.	0 1 2 3 4 5 6 7
25.	Currently, other priorities prevent me from focusing my attentio on this innovation.	0 1 2 3 4 5 6 7
26.	I know of another innovation that I would like to see used in place of this innovation.	0 1 2 3 4 5 6 7
27.	I am concerned about how my facilitating the use of this innovation affects those directly involved in the use of it.	0 1 2 3 4 5 6 7
28.	Communication and problem-solving relative to this innovation take too much time.	0 1 2 3 4 5 6 7
29.	I wonder who will get the credit for implementing this innovation.	0 1 2 3 4 5 6 7
30.	I would like to know where I can learn more about this innovation.	0 1 2 3 4 5 6 7
31.	I would like to modify my mode of facilitating the use of this innovation based on the experiences of those directly involved in its use.	0 1 2 3 4 5 6 7

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0	1	2	3	4	5	6	7
Irrelevant	Not true of me now		Somewhat true of me now			Very true of me now	

32. I have alternate innovations in mind that I think would better serve the needs of our situation. 0 1 2 3 4 5 6 7

33. I would like to familiarize other departments or persons with the progress and process of facilitating the use of this innovation. 0 1 2 3 4 5 6 7

34. I am concerned about finding and allocating time needed for this innovation. 0 1 2 3 4 5 6 7

35. I have information about another innovation that I think would produce better results than the one we are presently using. 0 1 2 3 4 5 6 7

PLEASE COMPLETE THE FOLLOWING:

36. Male _____ Female _____

37. Age _____ 20-29 _____ 30-39 _____ 40-49 _____ 50-59 _____ 60 or over

38. What, specifically, is your current position (e.g., Dean, Regional Service Center Evaluator, Secondary School Principal)?_____

39. How many years have you been in your current position?_____

40. In total, how many years have you been in a position similar to the one you have now? _____

41. How long have you been involved with the implementation of the innovation you focused on for this questionnaire? Years _____ Months _____

42. Are you currently involved in implementing any other innovation? Yes ___ No ___

43. Use this space (and back of this page) to express any concerns you have not been able to indicate in the questionnaire.

44. What do you hope to learn from this workshop?

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APPENDIX B

CFSoC Raw Score-Percentile Conversion

CF Stages of Concern Raw Score-Percentile Conversion

Chart of Stages of Concern Questionnaire About
Facilitating the Use of an Innovation

Five Item Raw Scale Score Total	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
0	0	0	0	0	0	0	0
1	1	2	1	1	0	0	1
2	2	3	2	1	0	0	3
3	4	5	4	2	1	0	5
4	7	8	7	2	1	0	8
5	14	13	12	5	1	0	13
6	22	18	18	8	1	1	18
7	31	21	24	11	1	1	23
8	40	26	30	15	2	2	31
9	48	30	34	19	2	3	39
10	55	34	39	22	2	3	47
11	61	37	43	26	2	4	55
12	69	40	49	30	2	5	63
13	75	43	56	35	3	7	68
14	81	46	62	40	3	8	75
15	87	49	68	44	4	9	81
16	91	53	73	50	5	12	86
17	94	56	77	55	6	15	89
18	96	59	79	60	7	18	90
19	97	61	81	66	9	21	92
20	98	64	84	71	11	24	95
21	99	66	87	74	13	28	96
22	99	69	89	78	16	32	97
23	99	72	91	82	20	36	97
24	99	76	93	86	27	40	98
25	99	79	95	89	33	43	98
26	99	81	97	91	39	48	99
27	99	84	98	93	46	54	99
28	99	87	99	94	54	60	99
29	99	89	99	94	62	67	99
30	99	92	99	95	68	72	99
31	99	94	99	96	74	77	99
32	99	96	99	97	82	82	99
33	99	98	99	98	87	85	99
34	99	99	99	99	91	91	99
35	99	99	99	99	97	97	99
Five Item Raw Scale Score Total	Percentile Conversion in Above Columns 0	1	2	3	4	5	6

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APPENDIX C

Computer Scoring the CFSoCQ

SAS PROGRAM FOR SCORING THE

CHANGE FACILITATOR STAGE OF CONCERN QUESTIONNAIRE (CFSoCQ)

Archie A. George, University of Idaho, Moscow, Idaho

```
/* ------------------------------------------------------------------
   THIS PROGRAM SCORES CFSOCQ RESPONSES.  IT IS WRITTEN IN SAS, A
   COMMON LANGUAGE FOR THIS TYPE OF WORK.
   WHEN IMPLEMENTING, SCORE SEVERAL CFSOCQ QUESTIONNAIRES USING
   BOTH THE SELF-SCORING DEVICE AND THE PROGRAM, IN ADDITION TO
   COMPARING YOUR OUTPUT TO THAT IN THE DOCUMENTATION.

   THE PROGRAM CONSISTS OF THE FOLLOWING SECTIONS:

   A. READING THE SCORES AND PRINTING RAW SCALE SCORES.
      ERROR MESSAGES ARE ALSO PRINTED IF THERE ARE ANY INVALID DATA.
      NOTE:
      THE FIRST RECORD IN THE DATA FILE IS USED AS A TITLE STATEMENT.
      THAT IS, ITS CONTENTS (72 CHARACTERS) APPEAR AT THE TOP OF
      EVERY PAGE OF OUTPUT PRODUCED BY THIS PROGRAM.

   B. COMPUTING AND PRINTING THE MEANS AND STANDARD DEVIATIONS OF
      THE RAW SCALE SCORES.

   C. CONVERTING THE RAW SCALE SCORES TO PERCENTILES AND PRINTING
      THE PERCENTILES.

   D. USING THE AVERAGE OF THE RAW SCALE SCORES TO DETERMINE THE
      PERCENTILE SCORES FOR THE GROUP.

   E. PRODUCING THE GROUP AND INDIVIDUAL PROFILE PLOTS.
      THE PERCENTILES FOR THE GROUP ARE TREATED THE SAME AS THE
      INDIVIDUAL'S PERCENTILES IN THIS SECTION, WITH ID="GROUP".

   QUESTIONS ABOUT THE CODE SHOULD BE DIRECTED TO:

        ARCHIE GEORGE, MIS ANALYST
        MANAGEMENT INFORMATION SERVICES
        UNIVERSITY OF IDAHO, MOSCOW, IDAHO 83843

        PHONE: (208) 885-7994   OR  882-0925

        PROGRAM WRITTEN IN DECEMBER 1985.
   ------------------------------------------------------------------*/

OPTIONS PAGESIZE=62 LINESIZE=80;

CMS FI RESP  DISK CFSOCQ DATA  A;  /* AN EXTERNAL FILE CONTAINING  */
                                   /* THE CFSOCQ DATA IS ACCESSED  */

CMS FI TOPLINE DISK TOP LINE A;    /* THIS FILE IS CREATED BY THE  */
                                   /* SAS PROGRAM USING THE FIRST  */
                                   /* RECORD OF THE DATA FILE. IF  */
                                   /* ONE DOES NOT WISH TO HAVE A  */
                                   /* RECORD IDENTIFYING THE DATA  */
                                   /* IN THE DATA FILE, CREATE THIS*/
                                   /* FILE INDEPENDENTLY AND READ  */
                                   /* IT RATHER THAN THE "RESP"    */
```

```
                                        /* DATA FILE.                    */

DATA _NULL_; INFILE RESP OBS=1;
             INPUT FIRSTREC $72.;
             FILE TOPLINE NOPRINT NOTITLES;
             PUT 'TITLE ' @7 FIRSTREC ';'  ;

DATA RESP; INFILE RESP FIRSTOBS=2; FILE PRINT HEADER=H;
           %INCLUDE TOPLINE;
           KEEP ID RAW0-RAW6;
           INPUT ID $1-10 @21(A01-A35)($1.) ALLRESP $21-55;

           /* THIS FORMAT EXPECTS A 10-CHAR ID AND 35 ITEM RESPONSES  */
           /* STARTING IN COLUMN 21.  IT MAY, OF COURSE, BE MODIFIED. */
           /* ADDITIONAL DATA MAY BE READ FROM THE DATA FILE, SUCH    */
           /* AS DEMOGRAPHICS, AND RETAINED WITH THE SCORES.  TO DO   */
           /* THIS, MODIFY THE "KEEP" STATEMENT ABOVE AND WRITE THE   */
           /* SCORES AND OTHER DATA OUT TOGETHER ONTO A NEW FILE.     */

      /* CHECK FOR INVALID DATA, AND PRINT MESSAGE */

            ARRAY A (K) $ 1 A01-A35;
            ARRAY M (K) $ 1 M01-M35;
            ARRAY R (K)     R01-R35;

      VALUES = 'OK';
      DO OVER A; IF A GE '0' AND A LE '7' THEN R = A ;
                           ELSE DO;
                                VALUES = 'BD';
                                M      = '$' ; END; END;

      IF VALUES = 'BD' THEN PUT @2 ID @15 (A01-A35)($1.) /
                            @7 'ERRORS' @15 (M01-M35)($1.) /;

      /* COMPUTE RAW SCALE SCORES                          */

      RAW0 = ROUND( MEAN(R02,R05,R10,R22,R25) * 5 ); /* COMPUTING RAW */
      RAW1 = ROUND( MEAN(R01,R07,R12,R16,R30) * 5 ); /* SCALE SCORES  */
      RAW2 = ROUND( MEAN(R08,R11,R17,R24,R29) * 5 );
      RAW3 = ROUND( MEAN(R04,R14,R23,R28,R34) * 5 );
      RAW4 = ROUND( MEAN(R06,R18,R21,R27,R31) * 5 );
      RAW5 = ROUND( MEAN(R03,R09,R15,R20,R33) * 5 );
      RAW6 = ROUND( MEAN(R13,R19,R26,R32,R35) * 5 );

RETURN;
H: PUT @2 'REPORT OF DATA ERRORS - PROGRAM SETS BAD DATA TO MISSING  '/
       @2 'VALUES AND PROCEEDS, COMPUTING SCALE SCORES USING THE MEAN'/
       @2 'OF THE VALID RESPONSES FOR MISSING VALUES.                 '/;

DATA _NULL_; SET RESP; FILE PRINT HEADER=H;

      PUT @2 ID @16 (RAW0-RAW6)(6.0);

      RETURN;
```

```
H:  PUT @2 '   CHANGE FACILITATOR STAGE OF CONCERN RAW SCALE SCORES'//
        @2 'RESPONDENT        0    1    2    3    4    5    6'/
        @2 '----------       ---  ---  ---  ---  ---  ---  ---';


/*-------------------------------------------------------------------*/
/*  THIS NEXT SECTION COMPUTES THE MEANS AND STANDARD DEVIATIONS     */
/*  OF THE RAW SCALE SCORES.                                         */
/*  THE PROGRAM IS SET UP TO COMPUTE ONLY ONE SET OF STATISTICS,     */
/*  FOR THE WHOLE GROUP, BUT COULD BE MODIFIED TO COMPUTE            */
/*  STATISTICS FOR SEPARATE GROUPS.                                  */
/*-------------------------------------------------------------------*/

PROC MEANS DATA=RESP NOPRINT;
    VAR RAW0-RAW6;
    OUTPUT OUT=RSTATS MEAN=AVE0-AVE6 STD=SD0-SD6;

DATA _NULL_; SET RSTATS; FILE PRINT HEADER=H;

    PUT @2 'MEANS' @16 (AVE0-AVE6)(6.0)/
        @2 'STDS ' @16 (SD0 -SD6 )(6.0);

    RETURN;
H:  PUT @2 '   CHANGE FACILITATOR STAGE OF CONCERN GROUP STATISTICS'//
        @2 'STATISTICS        0    1    2    3    4    5    6'/
        @2 '----------       ---  ---  ---  ---  ---  ---  ---';

/*-------------------------------------------------------------------*/
/* THE FOLLOWING SECTION CONVERTS THE RAW SCALE SCORES TO            */
/* PERCENTILE SCORES AND PRINTS THESE OUT.                           */
/*-------------------------------------------------------------------*/

CMS FI NORMS DISK CFSOCQ NORMS A; /* AN EXTERNAL FILE CONTAINING THE */
                                 /* TABLE OF NORMS IS ACCESSED      */

DATA NORM0(KEEP=PERC0)   /* CONSTRUCTING SAS DATA SETS SUITABLE FOR */
     NORM1(KEEP=PERC1)   /* DIRECT ACCESS, TO BE USED IN CONVERTING */
     NORM2(KEEP=PERC2)   /* RAW SCALE SCORES TO PERCENTILE SCORES   */
     NORM3(KEEP=PERC3)
     NORM4(KEEP=PERC4)
     NORM5(KEEP=PERC5)
     NORM6(KEEP=PERC6); INFILE NORMS;

     INPUT RAW PERC0-PERC6;

DATA RESP; SET RESP;

      GET0 = SUM(RAW0,1);   /* COMPUTING AN INDEX FOR DIRECT ACCESS */
      GET1 = SUM(RAW1,1);   /* OF THE NORMS USING THE RAW SCORES    */
      GET2 = SUM(RAW2,1);
      GET3 = SUM(RAW3,1);   /* USE OF THE SUM FUNCTION CAUSES SCALES*/
      GET4 = SUM(RAW4,1);   /* WITH ALL BAD DATA TO TREATED SAME AS */
      GET5 = SUM(RAW5,1);   /* A RAW SCORE OF ZERO, THUS AVOIDING   */
      GET6 = SUM(RAW6,1);   /* A MISSING VALUE AS AN INDEX.         */
```

```
      SET NORM0 POINT=GET0; /* ACCESSING THE NORMS,     */
      SET NORM1 POINT=GET1; /* EFFECTIVELY REPLACING    */
      SET NORM2 POINT=GET2; /* THE INDICES (GETS) WITH */
      SET NORM3 POINT=GET3; /* PERCENTILE SCORES        */
      SET NORM4 POINT=GET4;
      SET NORM5 POINT=GET5;
      SET NORM6 POINT=GET6; IF _ERROR_ EQ 1 THEN ABORT;


DATA _NULL_; SET RESP; FILE PRINT HEADER=H;

     PUT @2 ID @16 (PERC0-PERC6)(6.0);

     RETURN;
H:   PUT @2 '   CHANGE FACILITATOR STAGE OF CONCERN PERCENTILE SCORES'//
         @2 'RESPONDENT          0     1     2     3     4     5     6 '/
         @2 '----------         ---   ---   ---   ---   ---   ---   ---';


 /*-------------------------------------------------------------------*/
 /* THIS NEXT SECTION USES THE AVERAGES OF THE RAW SCORES TO OBTAIN    */
 /* THE GROUP PERCENTILE SCORES. THE GROUP PERCENTILES ARE PLOTTED     */
 /* IN THE SAME SECTION AS THE INDIVIDUAL PERCENTILES, BEING TREATED */
 /* AS SIMPLY ONE ADDITIONAL OBSERVATION, WITH THE ID = "GROUP".       */
 /* THE GRP_IND DATA SET CONTAINS BOTH THE GROUP AND THE INDIVIDUAL    */
 /* PERCENTILE SCORES.  IF ONE DOES NOT WISH TO PLOT INDIVIDUAL        */
 /* PROFILES, THE SET STATEMENT ONLY NEEDS TO BE MODIFIED, OMITTING    */
 /* THE "RESP" DATA SET (I.E.: DATA GRP_IND; SET RSTATS;).             */
 /*-------------------------------------------------------------------*/

DATA RSTATS; SET RSTATS;
    ID = 'GROUP      ';     /* NOTE 10-CHARACTER FIELD FOR ID */

   GET0 = ROUND( SUM(AVE0,1) );    /* COMPUTING AN INDEX  */
   GET1 = ROUND( SUM(AVE1,1) );    /* FOR DIRECT ACCESS   */
   GET2 = ROUND( SUM(AVE2,1) );    /* OF THE NORMS USING  */
   GET3 = ROUND( SUM(AVE3,1) );    /* THE RAW SCORE       */
   GET4 = ROUND( SUM(AVE4,1) );    /* AVERAGES.           */
   GET5 = ROUND( SUM(AVE5,1) );
   GET6 = ROUND( SUM(AVE6,1) );

    SET NORM0 POINT=GET0; /* ACCESSING THE NORMS,     */
    SET NORM1 POINT=GET1; /* EFFECTIVELY REPLACING    */
    SET NORM2 POINT=GET2; /* THE INDICES (GETS) WITH */
    SET NORM3 POINT=GET3; /* PERCENTILE SCORES        */
    SET NORM4 POINT=GET4;
    SET NORM5 POINT=GET5;
    SET NORM6 POINT=GET6; IF _ERROR_ EQ 1 THEN ABORT;


 DATA GRP_IND; SET RSTATS RESP; FILE PRINT N=PS HEADER=H;
```

```
S0H = ROUND(50 - PERC0 / 3.333);  /* COMPUTING THE LINE NUMBERS   */
S1H = ROUND(50 - PERC1 / 3.333);  /* FOR PLOTTING THE PERCENTILES */
S2H = ROUND(50 - PERC2 / 3.333);
S3H = ROUND(50 - PERC3 / 3.333);
S4H = ROUND(50 - PERC4 / 3.333);
S5H = ROUND(50 - PERC5 / 3.333);
S6H = ROUND(50 - PERC6 / 3.333);

PUT _PAGE_;

PUT #S0H @12 'XX' ;   /* PUTTING TWO XS ON THE SCALE AT THE */
PUT #S1H @20 'XX' ;   /* POINT REPRESENTING THE PERCENTILE  */
PUT #S2H @28 'XX' ;   /* SCORE                              */
PUT #S3H @36 'XX' ;
PUT #S4H @44 'XX' ;
PUT #S5H @52 'XX' ;
PUT #S6H @60 'XX' ;

     /* CONNECTING SCALE 0 TO SCALE 1 */

D0_1 = ( S1H - S0H ) / 6 ;          /* COMPUTING LINE NUMBERS FOR */
P01A = ROUND( S0H + 1 * D0_1 );     /* THE INTERMEDIATE POINTS,   */
P01B = ROUND( S0H + 2 * D0_1 );     /* I.E., FOR THE XS CONNECTING*/
P01C = ROUND( S0H + 3 * D0_1 );     /* THE PERCENTILE SCORES ON   */
P01D = ROUND( S0H + 4 * D0_1 );     /* THE GRAPH                  */
P01E = ROUND( S0H + 5 * D0_1 );
P01F = ROUND( S0H + 6 * D0_1 );

PUT #P01A @14 'X';  /* PUTTING THE CONNECTING XS ON THE GRAPH */
PUT #P01B @15 'X';
PUT #P01C @16 'X';
PUT #P01D @17 'X';
PUT #P01E @18 'X';
PUT #P01F @19 'X';

     /* CONNECTING SCALE 1 TO SCALE 2 */

D1_2 = ( S2H - S1H ) / 6 ;          /* COMPUTING LINE NUMBERS FOR */
P12A = ROUND( S1H + 1 * D1_2 );     /* THE INTERMEDIATE POINTS,   */
P12B = ROUND( S1H + 2 * D1_2 );     /* I.E., FOR THE XS CONNECTING*/
P12C = ROUND( S1H + 3 * D1_2 );     /* THE PERCENTILE SCORES ON   */
P12D = ROUND( S1H + 4 * D1_2 );     /* THE GRAPH                  */
P12E = ROUND( S1H + 5 * D1_2 );
P12F = ROUND( S1H + 6 * D1_2 );

PUT #P12A @22 'X';  /* PUTTING THE CONNECTING XS ON THE GRAPH */
PUT #P12B @23 'X';
PUT #P12C @24 'X';
PUT #P12D @25 'X';
PUT #P12E @26 'X';
PUT #P12F @27 'X';

     /* CONNECTING SCALE 2 TO SCALE 3 */
```

```
D2_3 = ( S3H - S2H ) / 6 ;          /* COMPUTING LINE NUMBERS FOR */
P23A = ROUND( S2H + 1 * D2_3 );    /* THE INTERMEDIATE POINTS,   */
P23B = ROUND( S2H + 2 * D2_3 );    /* I.E., FOR THE XS CONNECTING*/
P23C = ROUND( S2H + 3 * D2_3 );    /* THE PERCENTILE SCORES ON   */
P23D = ROUND( S2H + 4 * D2_3 );    /* THE GRAPH                  */
P23E = ROUND( S2H + 5 * D2_3 );
P23F = ROUND( S2H + 6 * D2_3 );

PUT #P23A @30 'X';  /* PUTTING THE CONNECTING XS ON THE GRAPH */
PUT #P23B @31 'X';
PUT #P23C @32 'X';
PUT #P23D @33 'X';
PUT #P23E @34 'X';
PUT #P23F @35 'X';

     /* CONNECTING SCALE 3 TO SCALE 4 */

D3_4 = ( S4H - S3H ) / 6 ;          /* COMPUTING LINE NUMBERS FOR */
P34A = ROUND( S3H + 1 * D3_4 );    /* THE INTERMEDIATE POINTS,   */
P34B = ROUND( S3H + 2 * D3_4 );    /* I.E., FOR THE XS CONNECTING*/
P34C = ROUND( S3H + 3 * D3_4 );    /* THE PERCENTILE SCORES ON   */
P34D = ROUND( S3H + 4 * D3_4 );    /* THE GRAPH                  */
P34E = ROUND( S3H + 5 * D3_4 );
P34F = ROUND( S3H + 6 * D3_4 );

PUT #P34A @38 'X';  /* PUTTING THE CONNECTING XS ON THE GRAPH */
PUT #P34B @39 'X';
PUT #P34C @40 'X';
PUT #P34D @41 'X';
PUT #P34E @42 'X';
PUT #P34F @43 'X';

     /* CONNECTING SCALE 4 TO SCALE 5 */

D4_5 = ( S5H - S4H ) / 6 ;          /* COMPUTING LINE NUMBERS FOR */
P45A = ROUND( S4H + 1 * D4_5 );    /* THE INTERMEDIATE POINTS,   */
P45B = ROUND( S4H + 2 * D4_5 );    /* I.E., FOR THE XS CONNECTING*/
P45C = ROUND( S4H + 3 * D4_5 );    /* THE PERCENTILE SCORES ON   */
P45D = ROUND( S4H + 4 * D4_5 );    /* THE GRAPH                  */
P45E = ROUND( S4H + 5 * D4_5 );
P45F = ROUND( S4H + 6 * D4_5 );

PUT #P45A @46 'X';  /* PUTTING THE CONNECTING XS ON THE GRAPH */
PUT #P45B @47 'X';
PUT #P45C @48 'X';
PUT #P45D @49 'X';
PUT #P45E @50 'X';
PUT #P45F @51 'X';

     /* CONNECTING SCALE 5 TO SCALE 6 */

D5_6 = ( S6H - S5H ) / 6 ;          /* COMPUTING LINE NUMBERS FOR */
P56A = ROUND( S5H + 1 * D5_6 );    /* THE INTERMEDIATE POINTS,   */
P56B = ROUND( S5H + 2 * D5_6 );    /* I.E., FOR THE XS CONNECTING*/
```

```
   P56C = ROUND( B5H + 3 * D5_6 );  /* THE PERCENTILE SCORES ON   */
   P56D = ROUND( B5H + 4 * D5_6 );  /* THE GRAPH                  */
   P56E = ROUND( B5H + 5 * D5_6 );
   P56F = ROUND( B5H + 6 * D5_6 );

   PUT #P56A @54 'X';  /* PUTTING THE CONNECTING XS ON THE GRAPH */
   PUT #P56B @55 'X';
   PUT #P56C @56 'X';
   PUT #P56D @57 'X';
   PUT #P56E @58 'X';
   PUT #P56F @59 'X';

  PUT #53 @6 (PERC0-PERC6)(8.0);
  PUT #55 @25 'RESPONDENT: ' ID;
  RETURN;
 H:
PUT #1  @10 '      CHANGE FACILITATOR STAGE OF CONCERN PROFILE      ';
PUT #3  @10 '                    STAGE OF CONCERN                  ';
PUT #5  @10 '   0        1        2        3        4        5       6';
PUT #7  @10 '   A        I        P        M        C        C       R';
PUT #8  @10 '   W        N        E        A        O        O       E';
PUT #9  @10 '   A        F        R        N        N        L       F';
PUT #10 @10 '   R        O        S        A        S        L       O';
PUT #11 @10 '   E        R        O        G        E        A       C';
PUT #12 @10 '   N        M        N        E        Q        B       U';
PUT #13 @10 '   E        A        A        M        U        O       S';
PUT #14 @10 '   S        T        L        E        E        R       I';
PUT #15 @10 '   S        I                 N        N        A       N';
PUT #16 @10 '            O                 T        C        T       G';
PUT #17 @10 '            N                          E        I        ';
PUT #18 @10 '            A                                   O        ';
PUT #19 @10 '            L                                   N        ';
DO L = 20 TO 50;                                                    '; END;
PUT # L @10 '   -
DO L = 20 TO 47 BY 3;                                               '; END;
PUT # L @10 '   -        -        -        -        -        -      ';
PUT #20 @9  '100--      --       --       --       --       --     ';
PUT #26 @10 '80--       --       --       --       --       --     ';
PUT #32 @10 '60--       --       --       --       --       --     ';
PUT #38 @10 '40--       --       --       --       --       --     ';
PUT #44 @10 '20--       --       --       --       --       --     ';
PUT #50 @10 ' 0-----------------------------------------------------';
PUT #51 @10 '   0        1        2        3        4        5       6';
PUT #57 @1
  '    RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL   ';
PUT #58 @1
  'R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN';
```

```
-------------- FILE CFSOCQ DATA ---------------------------
OFFICIAL TEST DATA FOR THE CFSOCQ
TEST, KEY            10530412502163512465403206432146536
TEST,SCALE           11112121232312343224343453445554555
BLANKS,KEY           1 5304 250 1   12 6 40320     46536
LETTER/KEY           1A5304B250C1DEF12G6H40320IJKLM46536
8S AND 9S            18530492508198912869403208989846536
ALL BLANKS
ALL ZEROS            00000000000000000000000000000000000
RAW = 1              01000011000001000100000000000000101
RAW = 10             07003077000307003703300003030000707
RAW = 20             07333377070377773703337703733303707
RAW = 30             77336377777677777677663777376337677 7
RAW = 35             77777777777777777777777777777777777
1 - 7                12345671234567123456712345671234567
-------------- FILE CFSOCQ NORMS ---------------------------
          0     0   0   0   0   0   0   0
          1     1   2   1   1   0   0   1
          2     2   3   2   1   0   0   3
          3     4   5   4   2   1   0   5
          4     7   8   7   2   1   0   8
          5    14  13  12   5   1   0  13
          6    22  18  18   8   1   1  18
          7    31  21  24  11   1   1  23
          8    40  26  30  15   2   2  31
          9    48  30  34  19   2   3  39
         10    55  34  39  22   2   3  47
         11    61  37  43  26   2   4  55
         12    69  40  49  30   2   5  63
         13    75  43  56  35   3   7  68
         14    81  46  62  40   3   8  75
         15    87  49  68  44   4   9  81
         16    91  53  73  50   5  12  86
         17    94  56  77  55   6  15  89
         18    96  59  79  60   7  18  90
         19    97  61  81  66   9  21  92
         20    98  64  84  71  11  24  95
         21    99  66  87  74  13  28  96
         22    99  69  89  78  16  32  97
         23    99  72  91  82  20  36  97
         24    99  76  93  86  27  40  98
         25    99  79  95  89  33  43  98
         26    99  81  97  91  39  48  99
         27    99  84  98  93  46  54  99
         28    99  87  99  94  54  60  99
         29    99  89  99  94  62  67  99
         30    99  92  99  95  68  72  99
         31    99  94  99  96  74  77  99
         32    99  96  99  97  82  82  99
         33    99  98  99  98  87  85  99
         34    99  99  99  99  91  91  99
         35    99  99  99  99  97  97  99
```

OFFICIAL TEST DATA FOR THE CPSOCQ
12:42 TUESDAY, DECEMBER 10, 19

REPORT OF DATA ERRORS - PROGRAM SETS BAD DATA TO MISSING VALUES AND PROCEEDS, COMPUTING SCALE SCORES USING THE MEAN OF THE VALID RESPONSES FOR MISSING VALUES.

```
BLANKS,KEY    1 5304 250 1   12 6 40320      46536
     ERRORS    $    $   $ $$$  $ $     $$$$$

LETTER/KEY    1A5304B250C1DEF12G6H40320IJKLM46536
     ERRORS    $    $   $ $$$  $ $     $$$$$

8S AND 9S     1E5304925081989128694032OE989846536
     ERRORS    $    $   $ $$$  $ $     $$$$$

ALL BLANKS
     ERRORS   $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
```

OFFICIAL TEST DATA FOR THE CPSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN RAW SCALE SCORES

RESPONDENT	0	1	2	3	4	5	6
TEST, KEY	0	5	10	15	20	25	30
TEST,SCALE	15	15	15	15	15	15	15
BLANKS,KEY	0	5	10	15	20	25	30
LETTER/KEY	0	5	10	15	20	25	30
8S AND 9S	0	5	10	15	20	25	30
ALL BLANKS	.	.	.	.	.	.	.
ALL ZEROS	0	0	0	0	0	0	0
RAW = 1	1	1	1	1	1	1	1
RAW = 10	10	10	10	10	10	10	10
RAW = 20	20	20	20	20	20	20	20
RAW = 30	30	30	30	30	30	30	30
RAW = 35	35	35	35	35	35	35	35
1 - 7	15	17	12	26	26	17	27

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN GROUP STATISTICS

STATISTICS	0	1	2	3	4	5	6
MEANS	11	12	14	16	18	19	22
SIDS	13	11	10	10	10	11	12

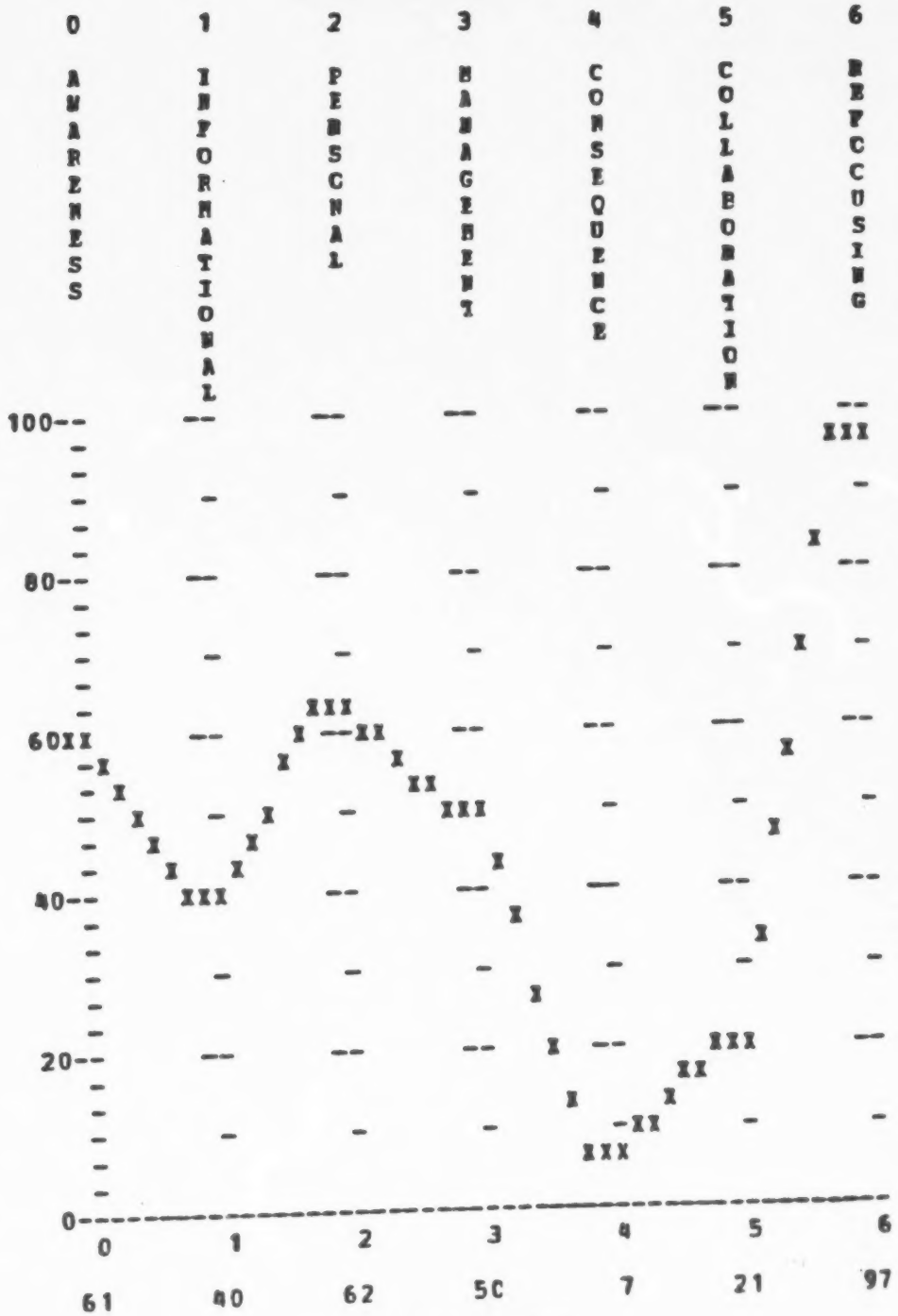
OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PERCENTILE SCORES

RESPONDENT	0	1	2	3	4	5	6
TEST, KEY	0	13	39	44	11	43	99
TEST,SCALE	87	49	68	44	4	9	81
BLANKS,KEY	0	13	39	44	11	43	99
LETTER/KEY	0	13	39	44	11	43	99
8S AND 9S	0	13	39	44	11	43	99
ALL BLANKS	0	0	0	0	0	0	0
ALL ZEROS	0	0	0	0	0	0	0
RAW = 1	1	2	1	1	0	0	1
RAW = 10	55	34	39	22	2	3	47
RAW = 20	98	64	84	71	11	24	95
RAW = 30	99	92	99	95	68	72	99
RAW = 35	99	99	99	99	97	97	99
1 - 7	87	56	49	91	39	15	99

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10,

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

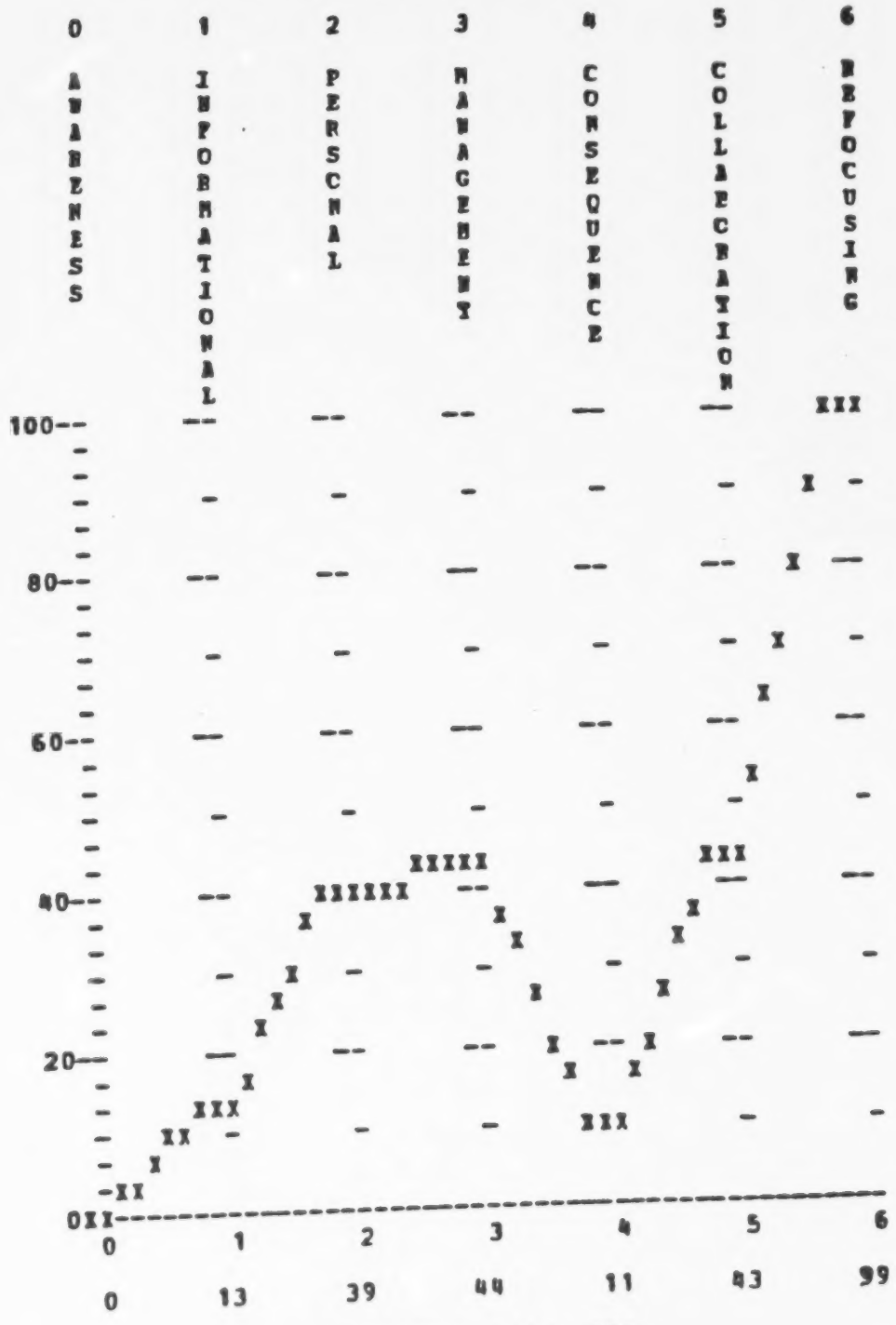


RESPONDENT: GROUP

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 1

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

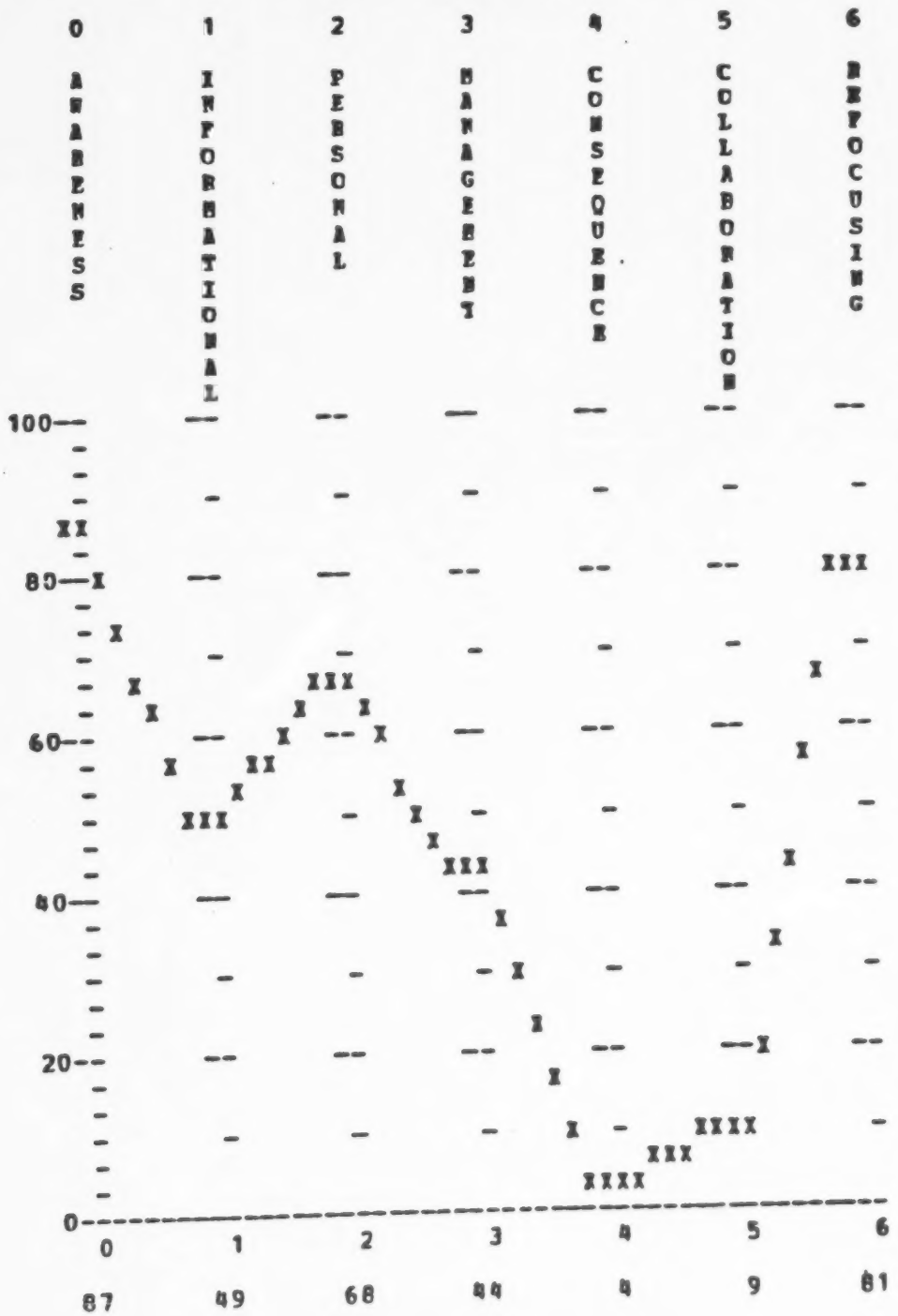


RESPONDENT: TEST, KEY

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
RDC CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

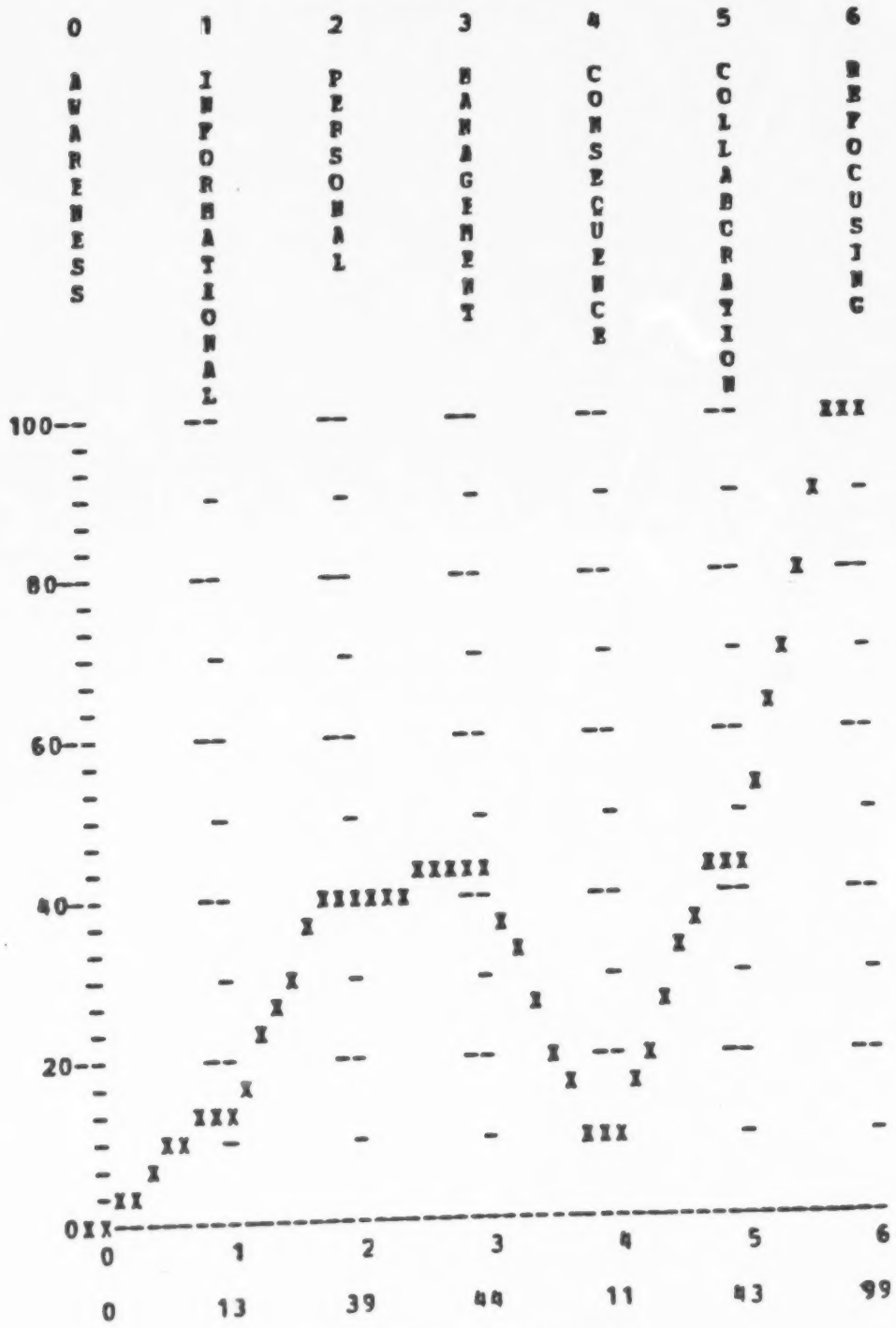
CHANGE FACILITATOR STAGE OF CONCERN PROFILE



RESPONDENT: TEST,SCALE

OFFICIAL TEST DATA FOR THE CPSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

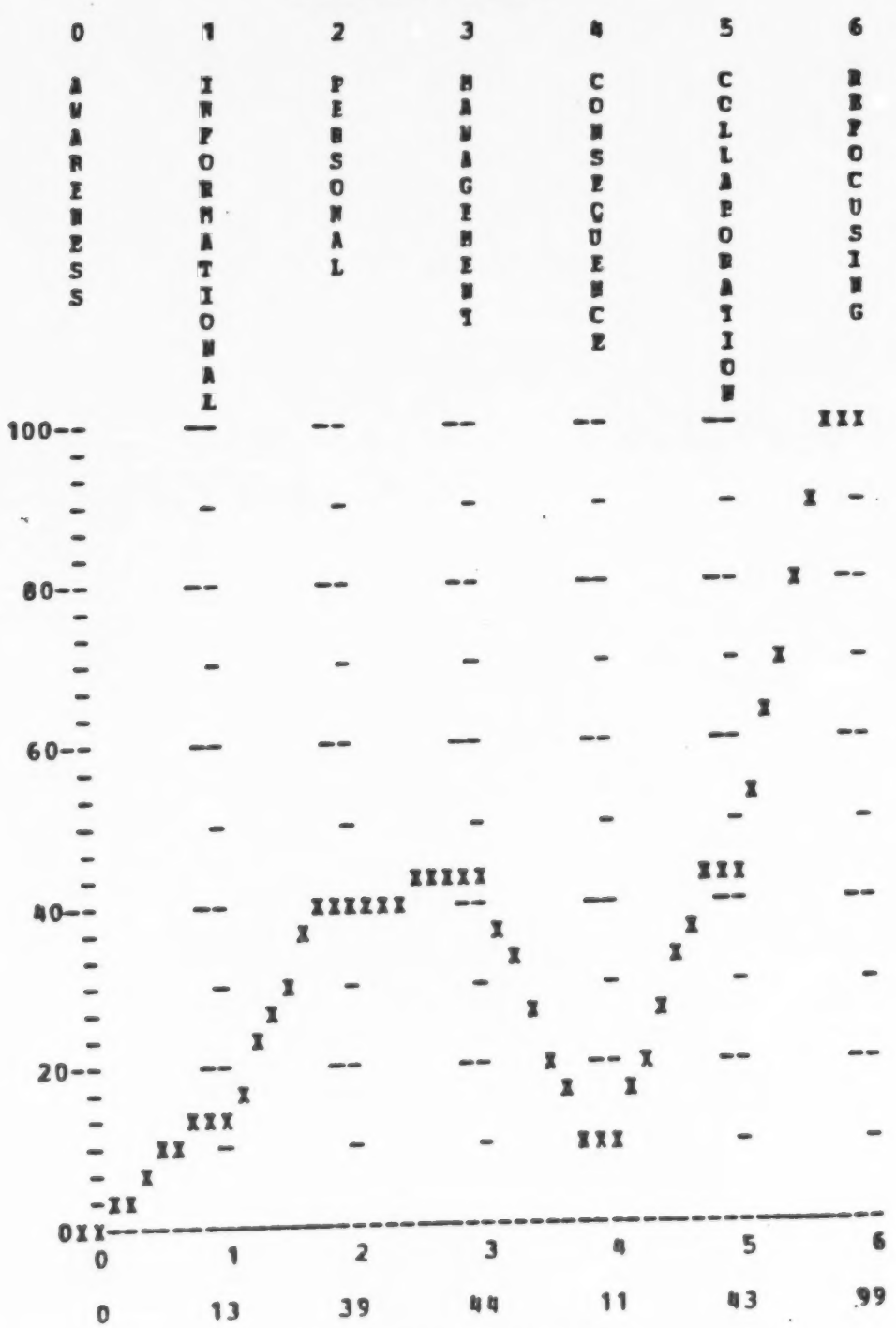


RESPONDENT: BLANKS,REY

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSCCQ
12:42 TUESDAY, DECEMBER 10,

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

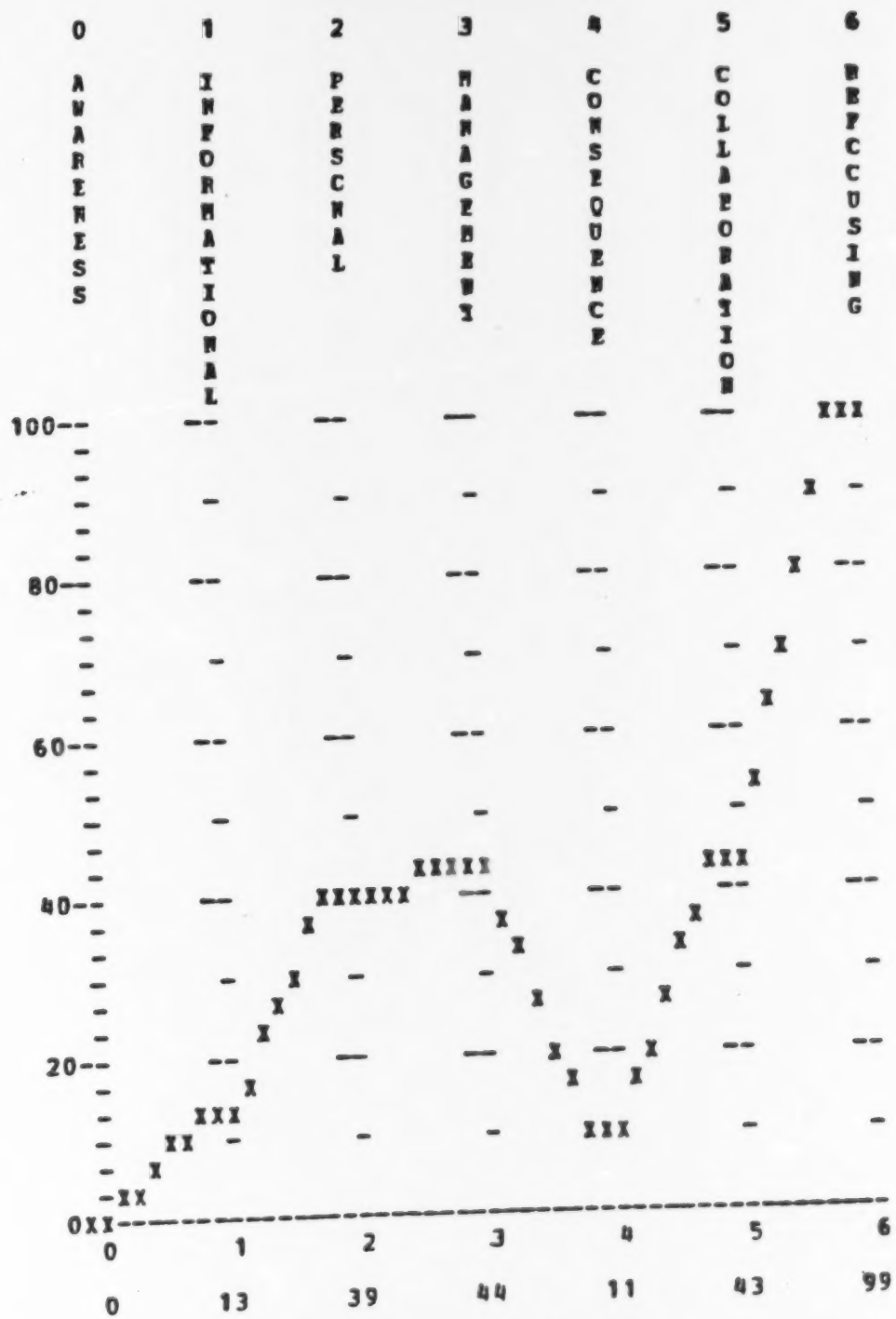


RESPONDENT: LETTER/KEY

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
RGD CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

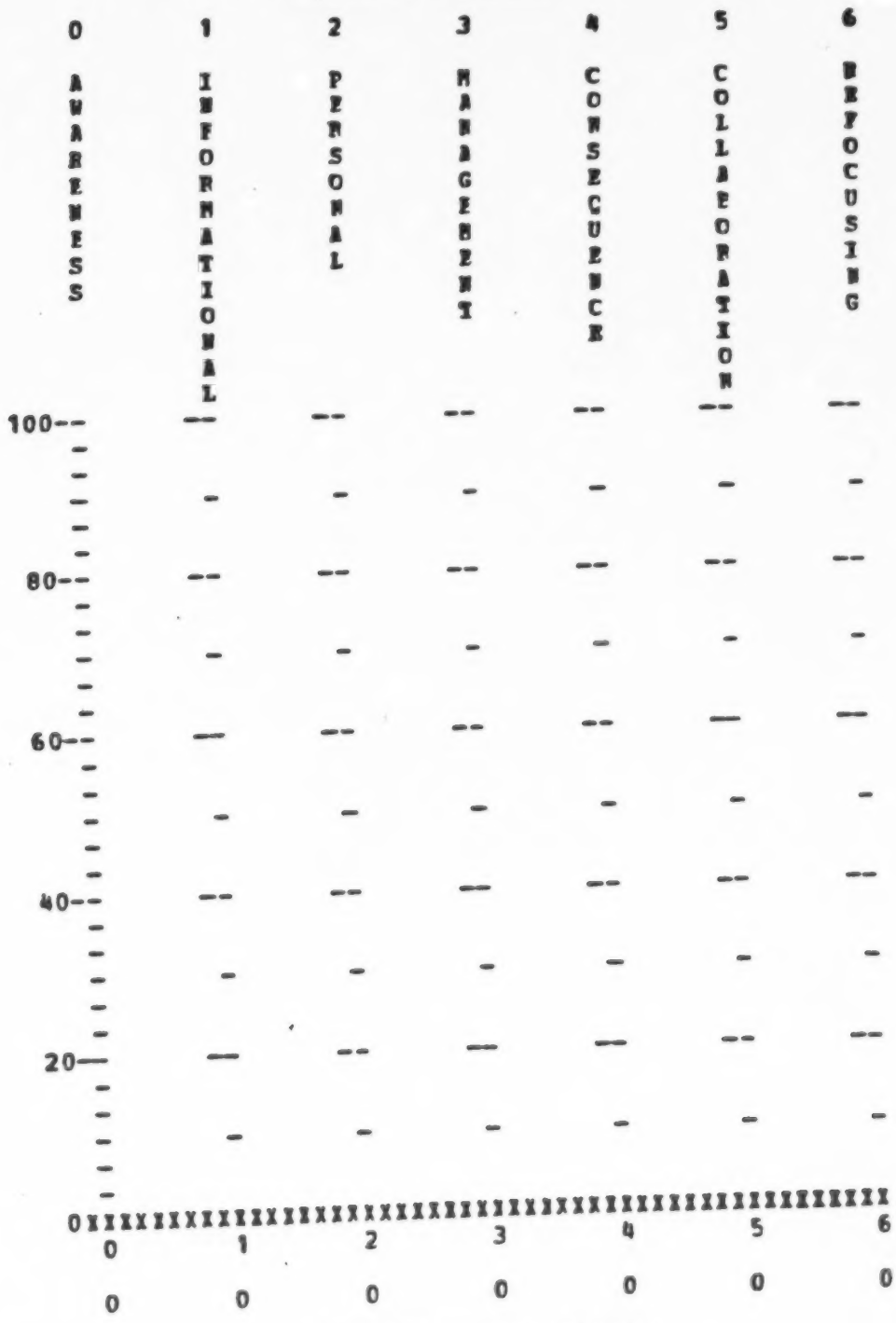


RESPONDENT: 8S AND 9S

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
RGD CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

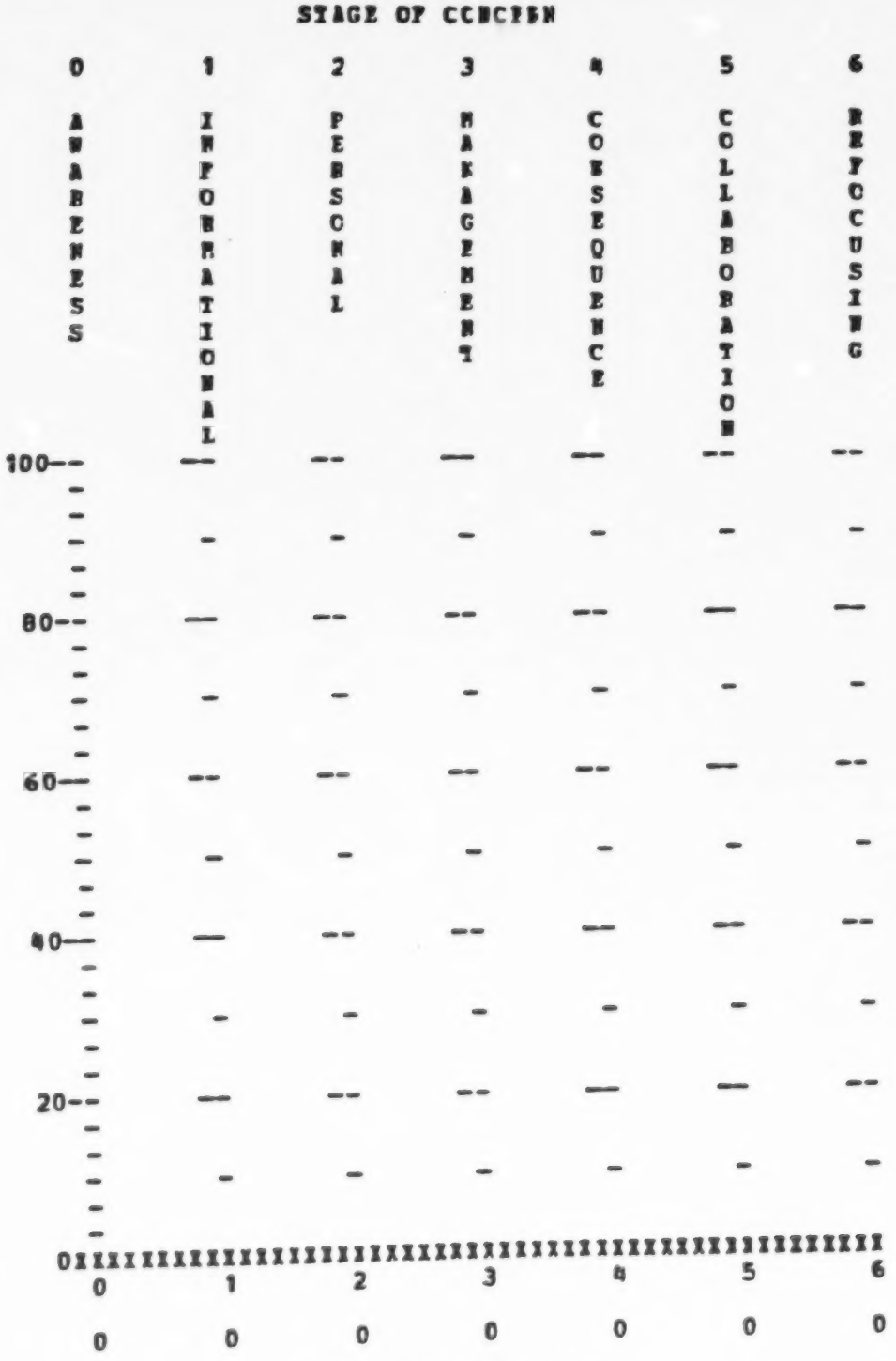


RESPONDENT: ALL BLANKS

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CPSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE



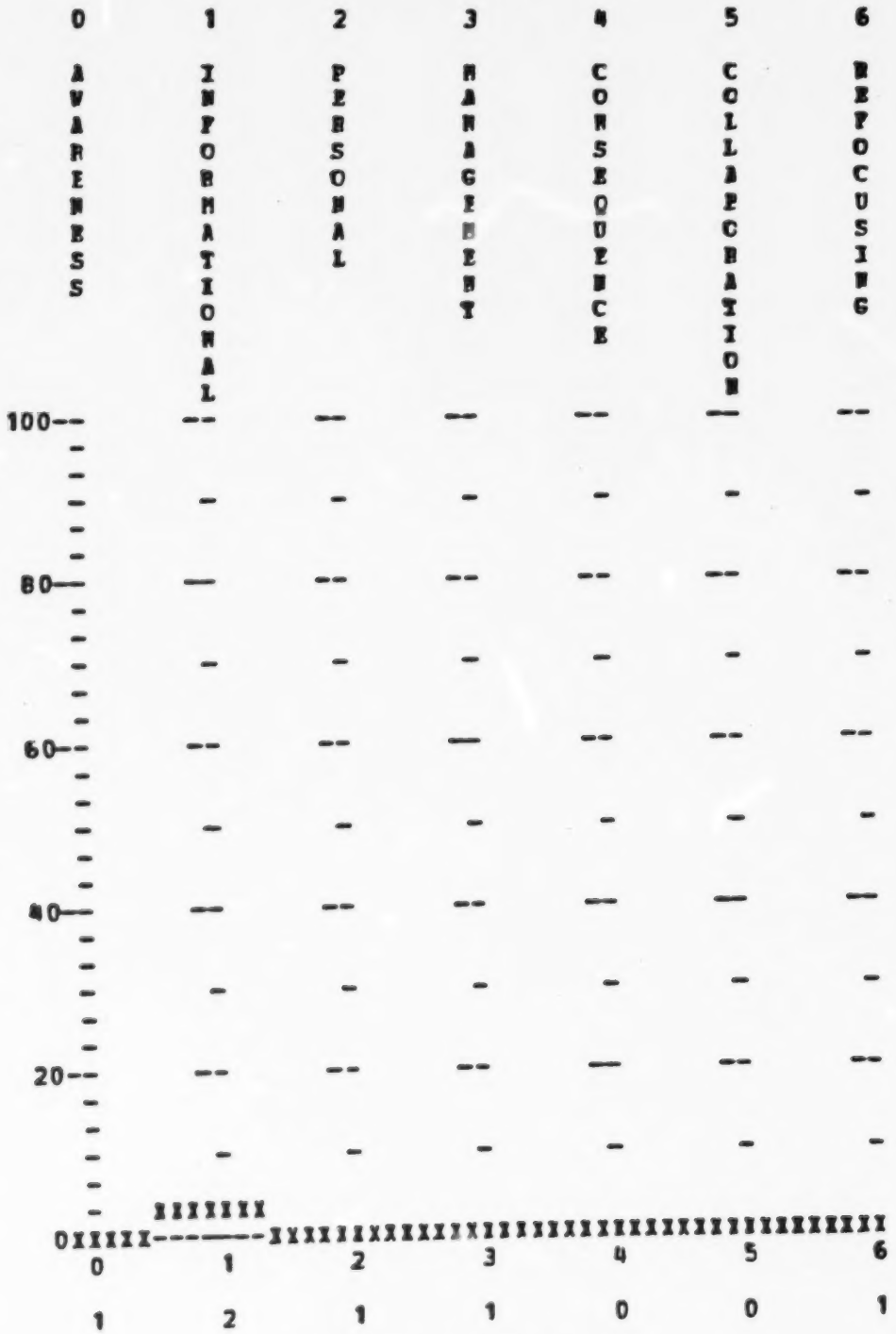
RESPONDENT: ALL ZEROS

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CPSOCQ

12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

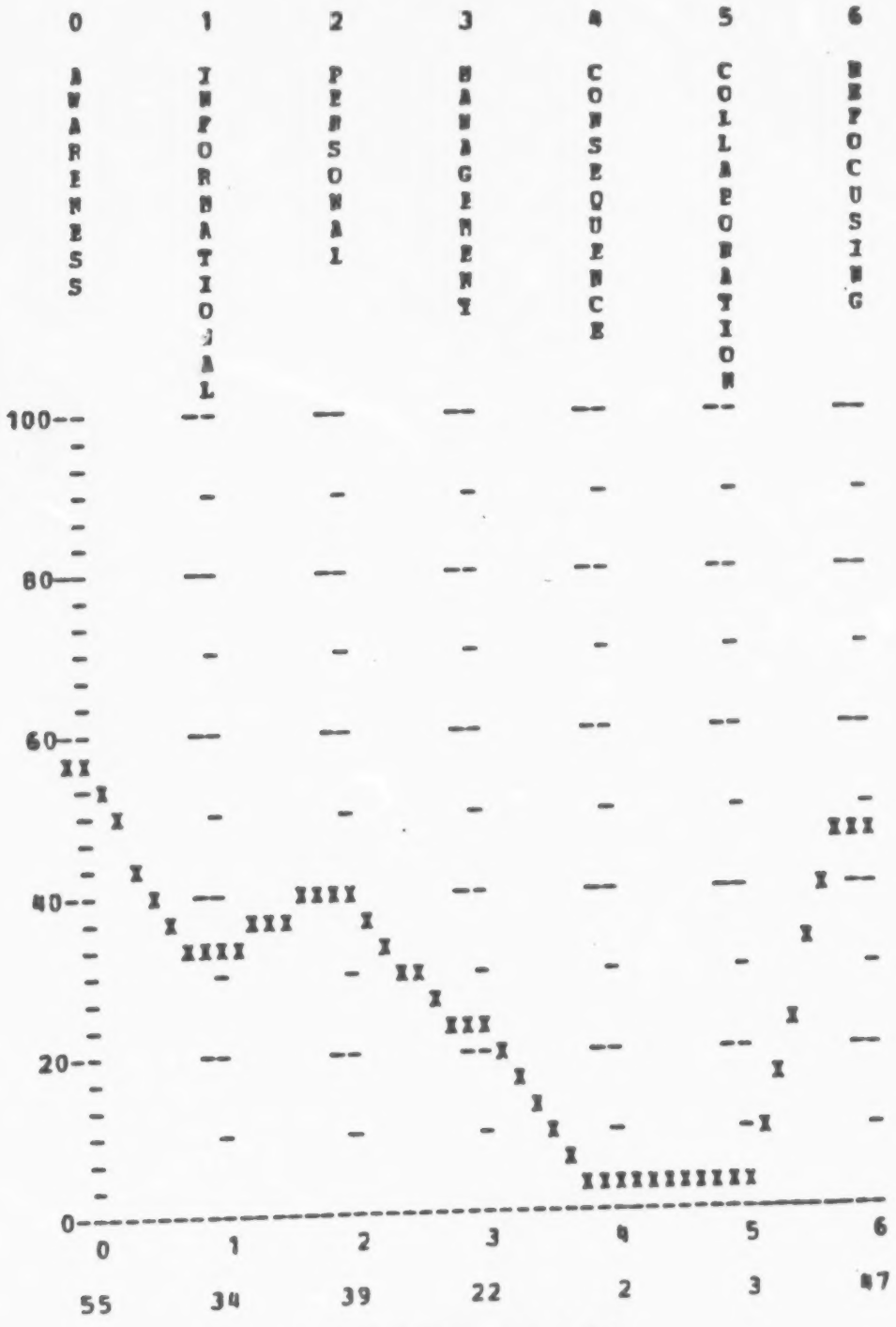


RESPONDENT: RAW = 1

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

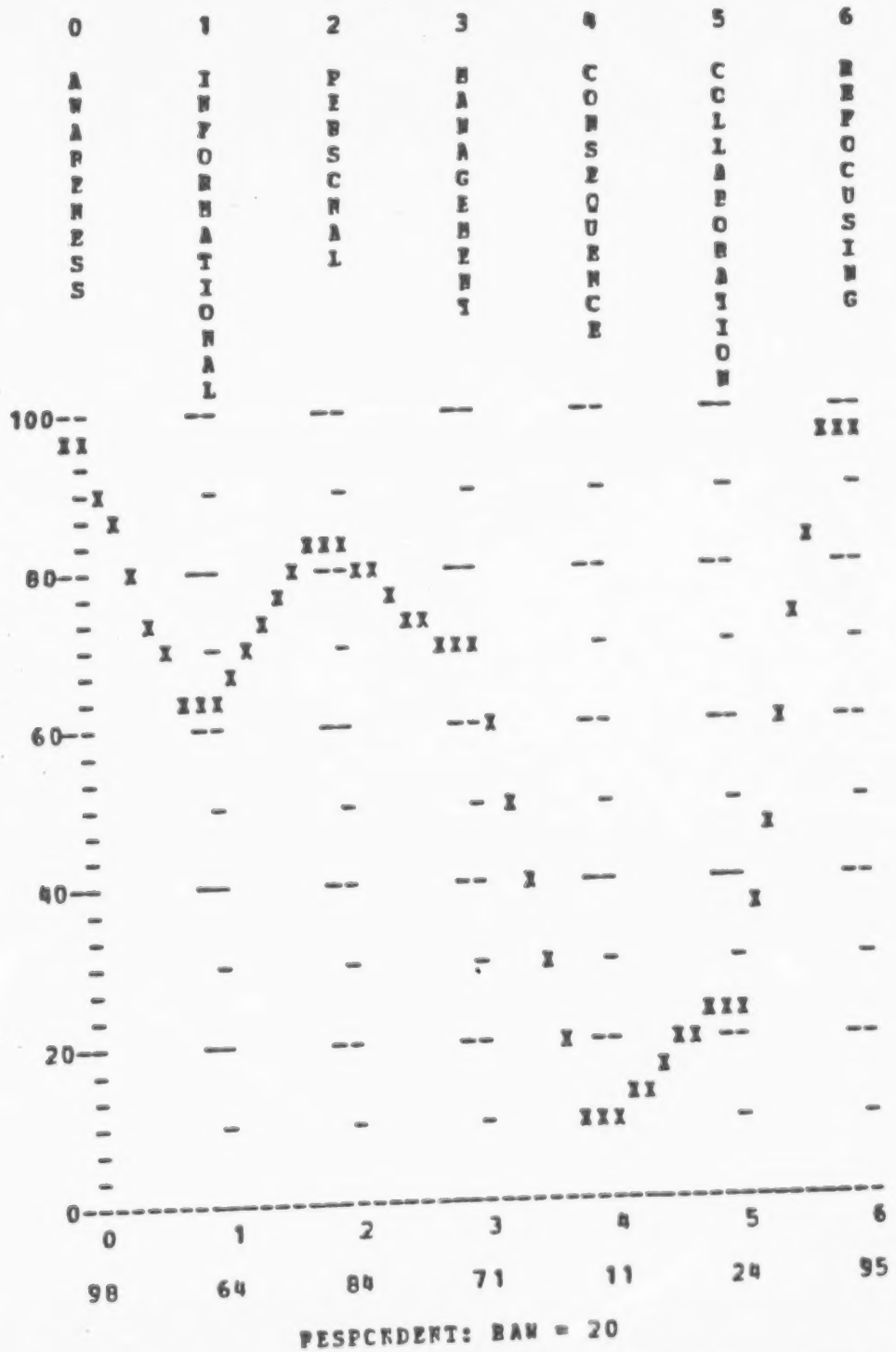


RESPONDENT: RAW = 10

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE

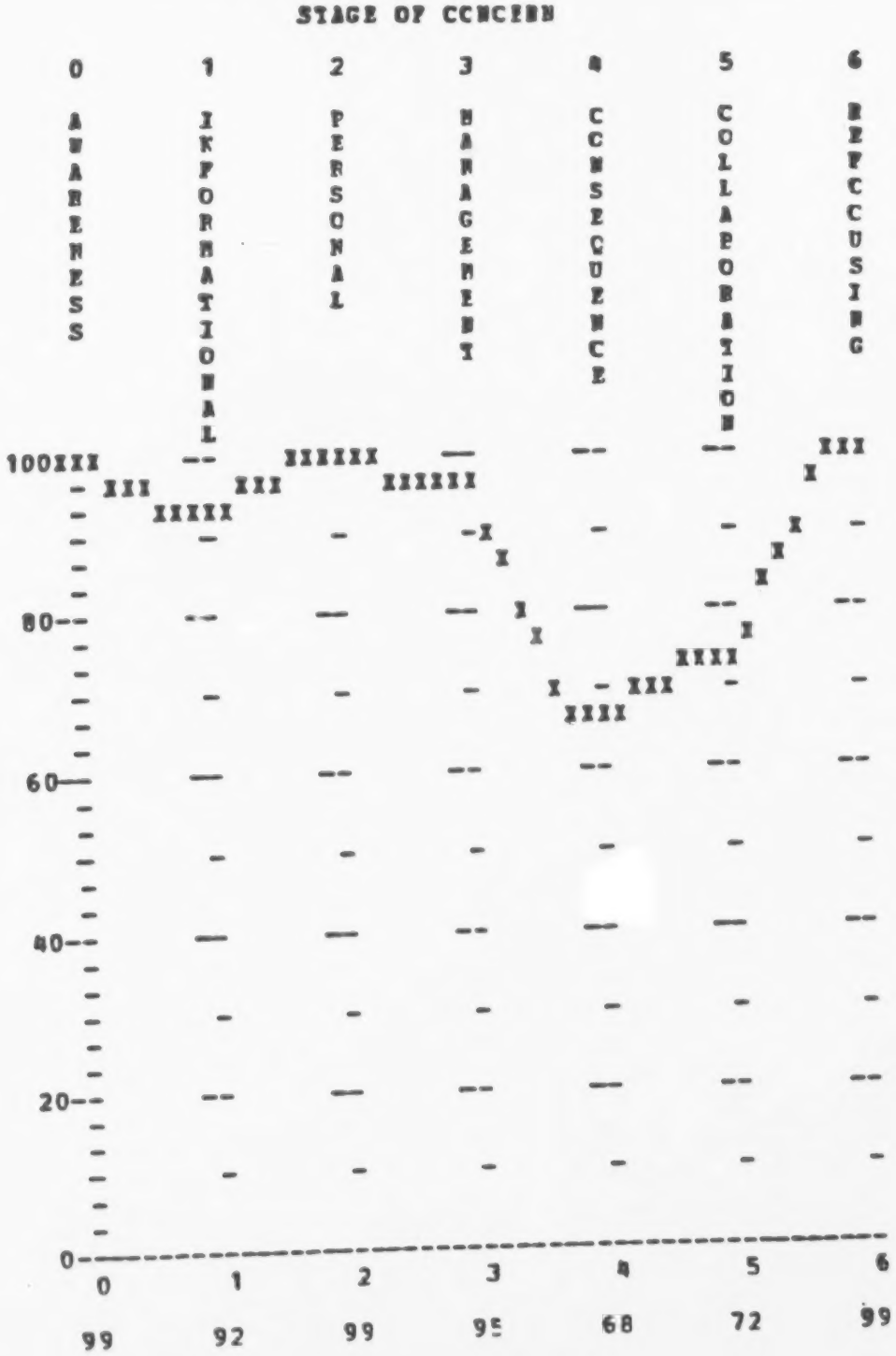


RESPONDENT: RAW = 20

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
RGD CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10, 19

CHANGE FACILITATOR STAGE OF CONCERN PROFILE



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RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CFSOCQ
12:42 TUESDAY, DECEMBER 10,

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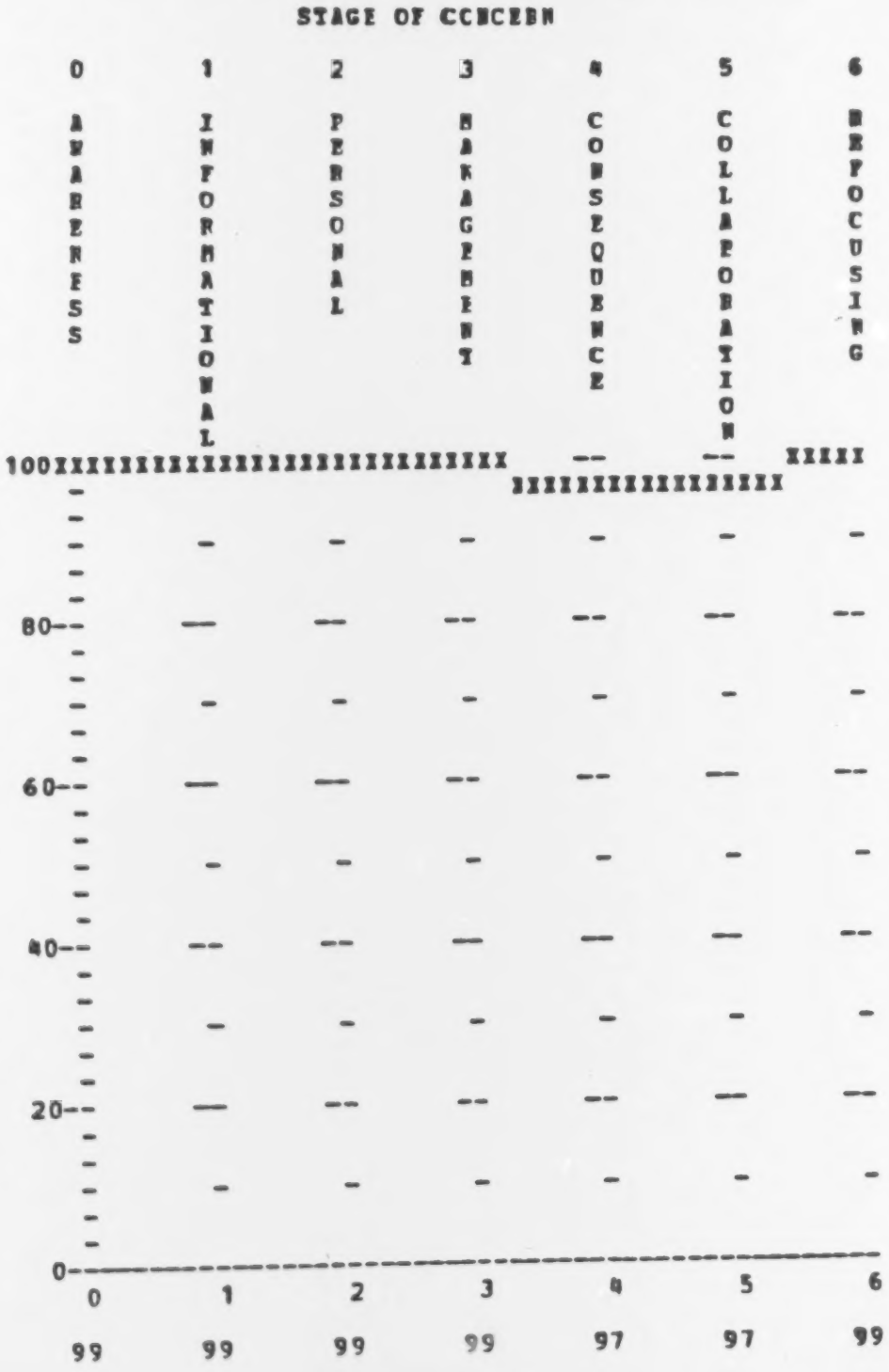

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RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

OFFICIAL TEST DATA FOR THE CBSUCQ
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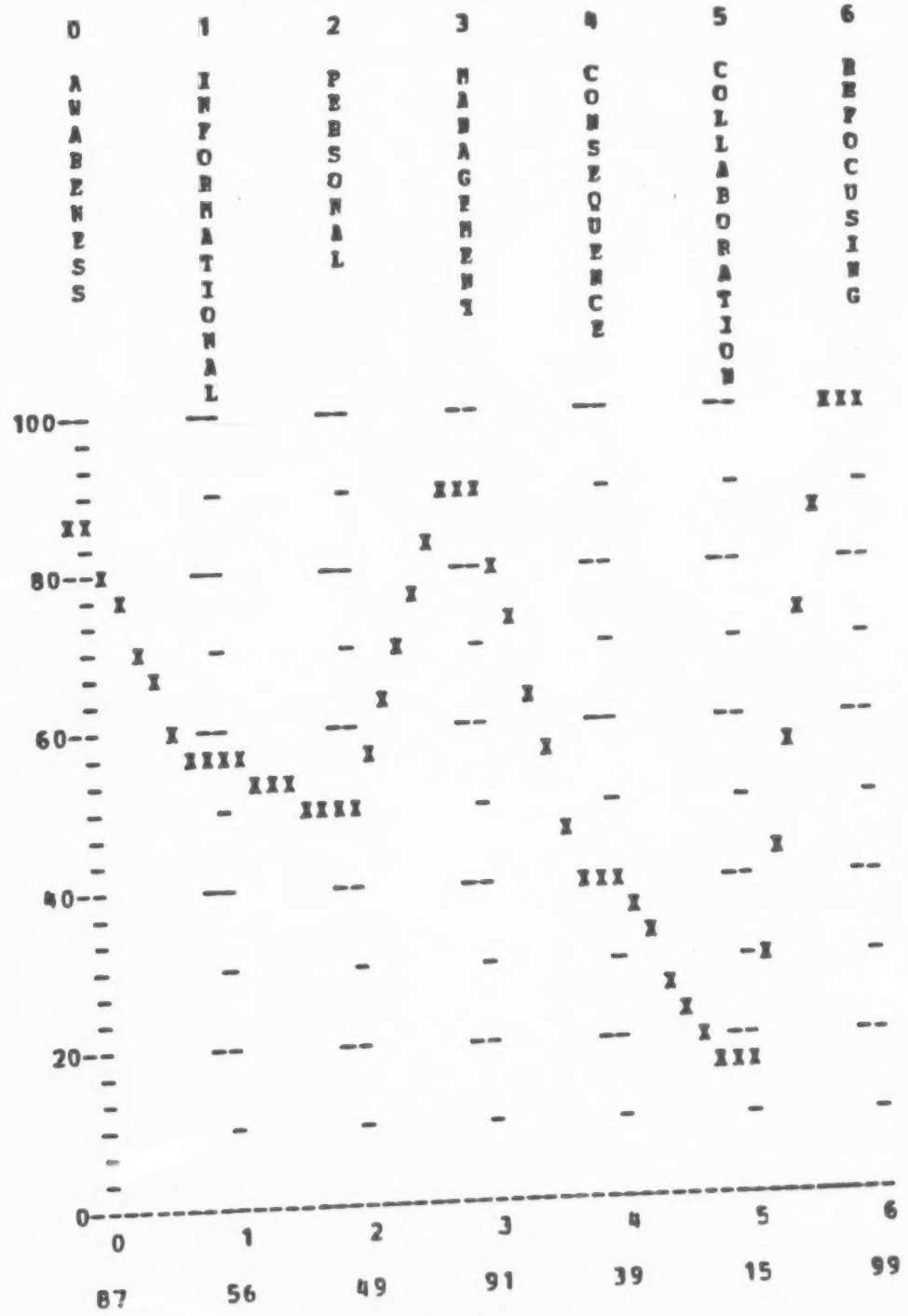

RESPONDENT: 1 - 7

RESEARCH ON IMPROVEMENT PROCESS/CONCERNS BASED ADOPTION MODEL
R&D CENTER FOR TEACHER EDUCATION, THE UNIVERSITY OF TEXAS AT AUSTIN

---------- FILE CFSOCQ DATA ----------

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LETTER/KEY             1A5304B250C1DEF12G6H40320IJKLM46536
0S AND 9S              18530492508198912869403208989846536
ALL BLANKS
ALL ZEROS              00000000C000000000CCCC000000000000000
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1 - 7                  12345671234567123456712345671234567
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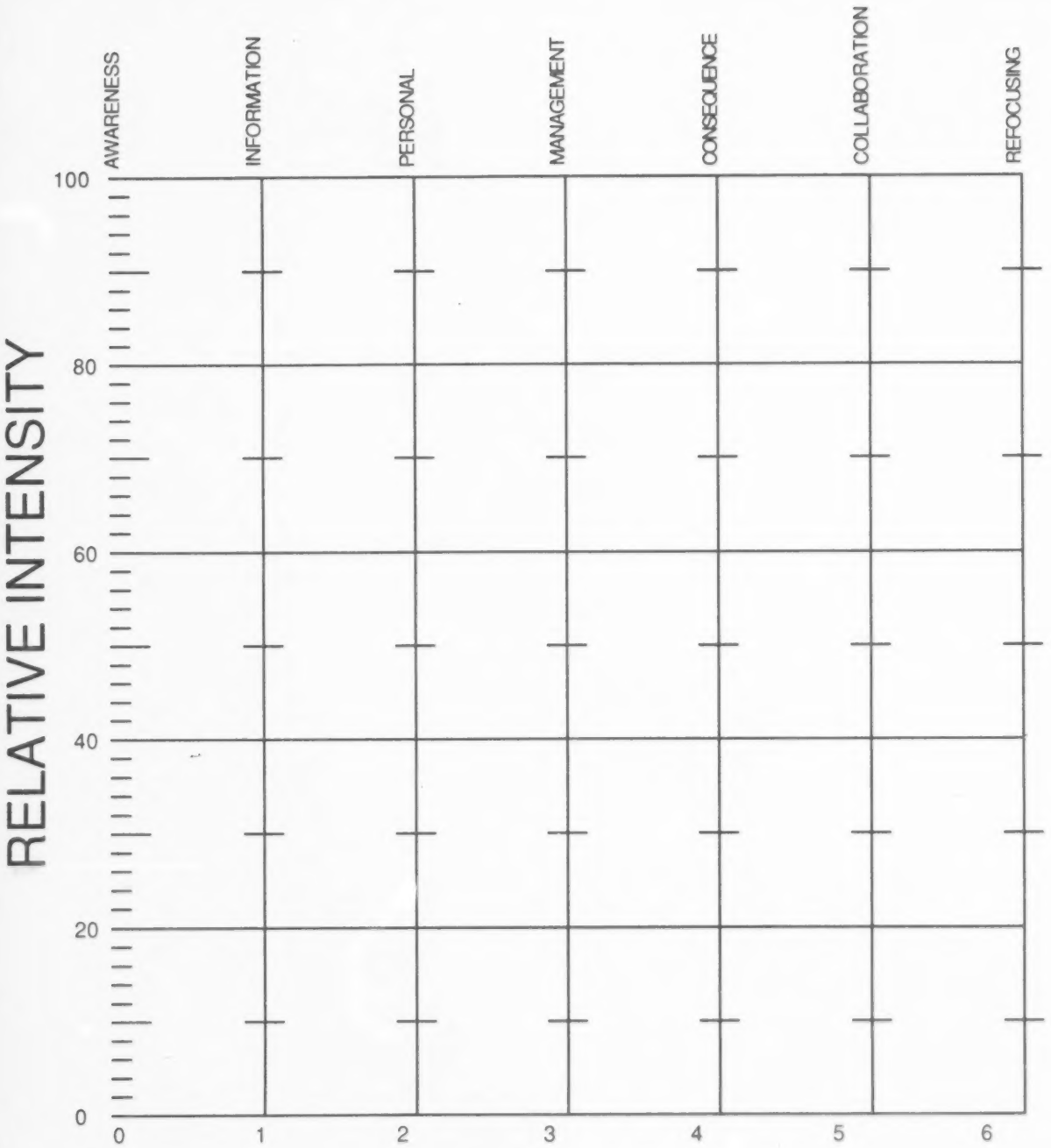
---------- FILE CFSOCQ NORMS ----------

0	0	0	0	0	0	0	0
1	1	2	1	1	0	0	1
2	2	3	2	1	0	0	3
3	4	5	4	2	1	0	5
4	7	8	7	2	1	0	8
5	14	13	12	5	1	0	13
6	22	18	18	8	1	1	18
7	31	21	24	11	1	1	23
8	40	26	30	15	2	2	31
9	48	30	34	19	2	3	39
10	55	34	39	22	2	3	47
11	61	37	43	26	2	4	55
12	69	40	49	30	2	5	63
13	75	43	56	35	3	7	68
14	81	46	62	40	3	8	75
15	87	49	68	44	4	9	81
16	91	53	73	50	5	12	86
17	94	56	77	55	6	15	89
18	96	59	79	60	7	18	90
19	97	61	81	66	9	21	92
20	98	64	84	71	11	24	95
21	99	66	87	74	13	28	96
22	99	69	89	78	16	32	97
23	99	72	91	82	20	36	97
24	99	76	93	86	27	40	98
25	99	79	95	89	33	43	98
26	99	81	97	91	39	48	99
27	99	84	98	93	46	54	99
28	99	87	99	94	54	60	99
29	99	89	99	94	62	67	99
30	99	92	99	95	68	72	99
31	99	94	99	96	74	77	99
32	99	96	99	97	82	82	99
33	99	98	99	98	87	85	99
34	99	99	99	99	91	91	99
35	99	99	99	99	97	97	99

APPENDIX D

Grid for Plotting CFSoCQ Profile Scores



CFSoC Stages

Concerns Based Systems International

APPENDIX E

CFSoCQ Quick Scoring Device

A Quick Scoring Device for the Change Facilitator Stages of Concern Questionnaire (CFSoCQ)

The Quick Scoring Device can be used to hand score the CFSoCQ responses and to plot an individual profile. It is especially useful when only a small number of questionnaires need to be processed or when computer processing is not available. By following the step-by-step instructions, the CFSoCQ responses are transferred to the device, entered into seven scales, and each scale is totaled. Then the seven raw scale score totals are translated into percentile scores and plotted on a grid to produce the individual's CFSoCQ profile.

The following steps need to be carried out one-by-one. Notice that tasks required to fill in box B and row C are completed via instruction. Only part of the task required to fill in box E is completed. Please complete the task to familiarize yourself with the norms. Close attention is required to make sure each raw score is followed across to the correct stages and percentile column.

1. In the table labeled B on the Scoring Device, transcribe each of the 35 CFSoCQ circled responses from the questionnaire (raw data). Note that the numbered blanks are not in consecutive order.

2. Row C contains the Raw Scale Score Total for each stage (0-6). Take each of the seven columns (0-6) in Table B, add the numbers within each column, and enter the sum for each column (0-6) in the appropriate blank in Row C. Each of these seven Raw Scale Score Totals is a number between 0 and 35.

3. Table D contains the percentile scores for each Stage of Concern About Facilitating the Use of the Innovation. Find the Raw Scale Score Total for Stage 0 from Row C ("12" in the example); locate this number ("12") in the left-hand column in Table D, then look in the Stage 0 column to the right in Table D and circle that percentile rank ("69" in the example). Take the raw score for Stage 1 (31 in the example) to Table D and locate that numeral in the left hand "Raw Scale Score Total" column. Move across in the percentile table to the Stage 1 column and circle the percentile value (94 in the example). Do the same for Stages 2 through 6.

4. Transcribe the circled percentile scores for each stage (0-6) from Table D to Box E. Box E now contains seven numbers between 0 and 99.

5. Box F contains the CFSoCQ grid. From Box E, take the percentile score for Stage 0 ("69" in the example) and mark that point with a dot on the Stage 0 vertical line of the CFSoCQ grid. Do the same for Stages 1 through 6. Connect the points to form the CFSoCQ profile.

You can now check your own scoring by using the blank profile sheet. Note: You will want to make copies of the blank scoring device before writing on it. Reproduce the data in the example by recording the original data form the completed CFSoCQ.

CFSoCQ Quick Scoring Device

A

Date: _____

Site: _____ SS#: _____

Innovation: _____

B

Stage	0	1	2	3	4	5	6
	2___	1___	8___	4___	6___	3___	13___
	5___	7___	11___	14___	18___	9___	19___
	10___	12___	17___	23___	21___	15___	26___
	22___	16___	24___	28___	27___	20___	32___
	25___	30___	29___	34___	31___	33___	35___

Raw Score Totals C ___ ___ ___ ___ ___ ___ ___

Percentile Scores E ___ ___ ___ ___ ___ ___ ___

D

Five Item Raw Scale Score Total	Percentiles for: Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
0	0	1	0	0	0	0	0
1	1	2	1	1	0	0	1
2	2	3	2	1	0	0	3
3	4	5	4	2	1	0	5
4	7	8	7	2	1	0	8
5	14	13	12	5	1	0	13
6	22	18	18	8	1	1	18
7	31	21	24	11	1	1	23
8	40	26	30	15	2	2	31
9	48	30	34	19	2	3	39
10	55	34	39	22	2	3	47
11	61	37	43	26	2	4	55
12	69	40	49	30	2	5	63
13	75	43	56	35	3	7	68
14	81	46	62	40	3	8	75
15	87	49	68	44	4	9	81
16	91	53	73	50	5	12	86
17	94	56	77	55	6	15	89
18	96	59	79	60	7	18	90
19	97	61	81	66	9	21	92
20	98	64	84	71	11	24	95
21	99	66	87	74	13	28	96
22	99	69	89	78	16	32	97
23	99	72	91	82	20	36	97
24	99	76	93	86	27	40	98
25	99	79	95	89	33	43	98
26	99	81	97	91	39	48	99
27	99	84	98	93	46	54	99
28	99	87	99	94	54	60	99
29	99	89	99	94	62	67	99
30	99	92	99	95	68	72	99
31	99	94	99	96	74	77	99
32	99	96	99	97	82	82	99
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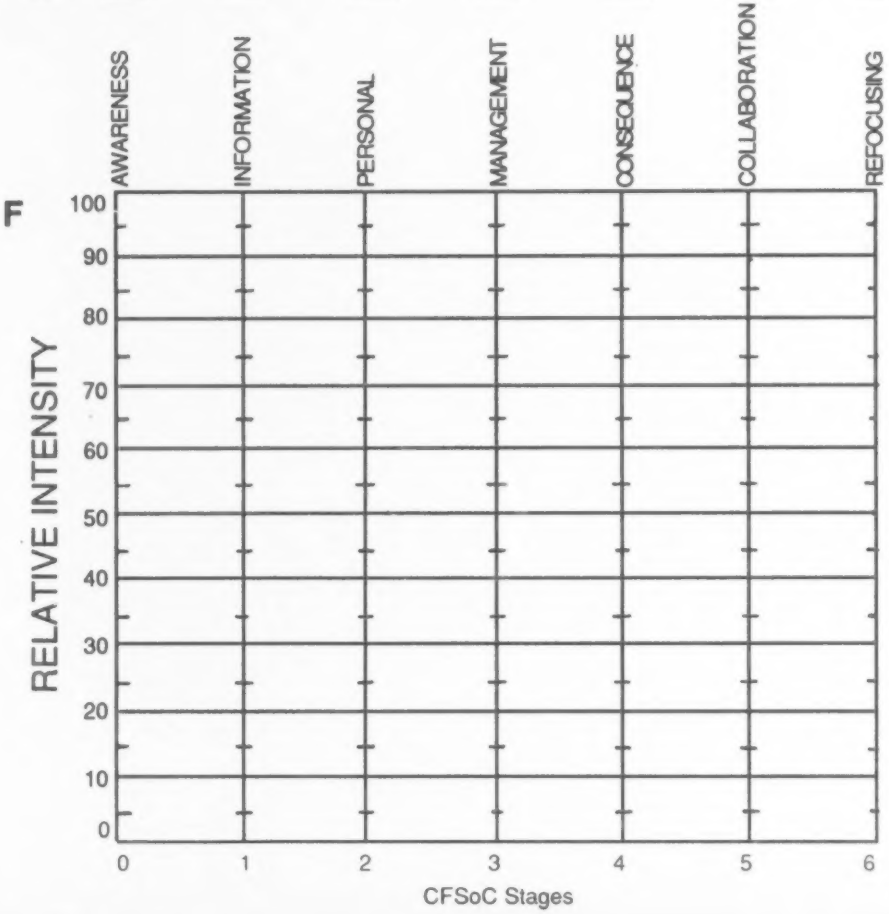
35	99	99	99	99	97	97	99

F



Concerns Based Systems International

CFSoCQ Quick Scoring Device

A

Date: May 6, 1991

Site: 25 SS#: 6102

Innovation: Unified Math

B

Stage 0	1	2	3	4	5	6
2 1	1 6	8 5	4 7	6 4	3 7	13 3
5 1	7 7	11 1	14 7	18 7	9 6	19 2
10 2	12 6	17 4	23 7	21 5	15 6	26 1
22 4	16 6	24 5	28 4	27 4	20 6	32 3
25 4	30 6	29 2	34 6	31 4	33 5	35 2

C Raw Score Totals: 12 | 31 | 17 | 31 | 24 | 30 | 11

E Percentile Scores: 69 | 94 | 77 | | | |

D

Five Item Raw Scale Score Total	Percentiles for: Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
0	0	1	0	0	0	0	0
1	1	2	1	1	0	0	1
2	2	3	2	1	0	0	3
3	4	5	4	2	1	0	5
4	7	8	7	2	1	0	8
5	14	13	12	5	1	0	13
6	22	18	18	8	1	1	18
7	31	21	24	11	1	1	23
8	40	26	30	15	2	2	31
9	48	30	34	19	2	3	39
10	55	34	39	22	2	3	47
11	61	37	43	26	2	4	55
12	69	40	49	30	2	5	63
13	75	43	56	35	3	7	68
14	81	46	62	40	3	8	75
15	87	49	68	44	4	9	81
16	91	53	73	50	5	12	86
17	94	56	77	55	6	15	89
18	96	59	79	60	7	18	90
19	97	61	81	66	9	21	92
20	98	64	84	71	11	24	95
21	99	66	87	74	13	28	96
22	99	69	89	78	16	32	97
23	99	72	91	82	20	36	97
24	99	76	93	86	27	40	98
25	99	79	95	89	33	43	98
26	99	81	97	91	39	48	99
27	99	84	98	93	46	54	99
28	99	87	99	94	54	60	99
29	99	89	99	94	62	67	99
30	99	92	99	95	68	72	99
31	99	94	99	96	74	77	99
32	99	96	99	97	82	82	99
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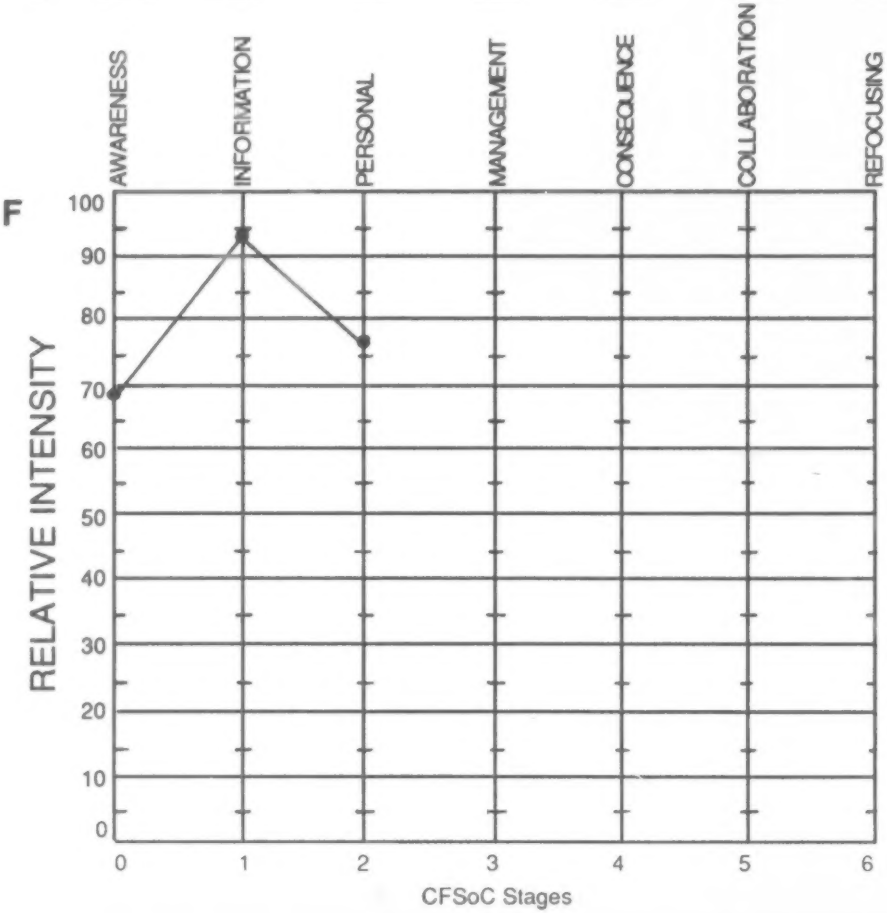
35	99	99	99	99	97	97	99

F



Concerns Based Systems International

Appendix F

CBAM International

CBAM International Leaders

For more information about the CFSoCQ, contact the authors or one of the following:

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Greeley, CO 80639

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P.O. Box 482
5201 Al Den Bosch THE NETHERLANDS